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The Hunterian Lectures
ON
RECENT DEVELOPMENTS IN THE RECOGNITION, TREATMENT, AND PROPHYLAXIS OF SYPHILIS.

Delivered before the Royal College of Surgeons of England on Nov. 7th and 10th, 1911,

BY H. C. FRENCH, M.R.C.S., L.R.C.P.,
MAJOR, ROYAL ARMY MEDICAL CORPS.

LECTURE II.*

Delivered on Nov. 10th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—In my first lecture I dealt with the diagnosis of syphilis, and in this it is proposed to deal with treatment.

ABORTIVE TREATMENT.

Persons conversant with early syphilis require to know two clinical facts if the spirochæta pallida is not definitely demonstrated—namely, Was induration present in the chancre? Were the adjacent lymphatic glands discretely enlarged? In untreated syphilis the number of cases where these two signs do not exist is very small; so that when they co-exist treatment is fully justified. Otherwise we should always wait for more definite evidence of the disease. The Wassermann reaction, unfortunately, does not help us much in the primary stage. The alleged abortive cure of syphilis in the primary stage by excising chancres, or treatment by new drugs, such as hectine and salvarsan, requires to be received with very considerable caution and closely examined. The so-called primary stage varies in different countries and with different observers. Results are not infrequently worked out on the relative frequency of syphilis occurring in a consecutive series of all venereal sores, but this is obviously fallacious. In the last 100 cases of untreated venereal sores occurring at Malta not 10 per cent. were syphilis. During two months two years ago the bulk of venereal sores were syphilis. Relative incidence is largely dependent on the value of control at the source.

A statement from the bacteriological side was recently made[1] that "during the past 15 months about 300 cases have been treated with salvarsan. ..... The number of cases in which the only clinical evidence of infection was the primary sore is 22. ..... In none of the 22 cases has any symptom appeared since the treatment." It is further stated by the same writer that "treatment should be begun as soon as possible where there is the suggestion of a primary syphilitic lesion: even if spirochætæ cannot be found and the serum reaction is negative, treatment should be begun without delay." I merely mention this example, as such premature claims to abort syphilis are of not infrequent occurrence. To pursue such a policy on insufficient evidence does not further the best interests of accurate diagnosis, and the confidence of the patient may be destroyed.

ARSENICAL COMPOUNDS.

Dr. Hallopeau (France), using hectine (benzol-sulphone-para-amino-phenol arsenate of sodium) (containing 21 per cent. of arsenic) recently claims to have aborted syphilis in five out of six cases when the drug was locally used in the sheath of the penis in combination with mercurial and potassium iodide treatment. He states "that the time has arrived to treat syphilis by 30 daily injections of hectine," and he does not hesitate under these conditions to "allow marriage immediately to syphilitics who have followed this cure." By the courtesy of the French colonial authorities at Tunis a supply of hectine was recently sent to Malta for my use. Owing, however, to careful diagnosis on the lines previously mentioned, to the continued use of mercury, and to local preventive measures, early syphilis, as will be later explained, has been entirely stamped out in Malta this year, and in a garrison of 7000 troops there was no primary syphilitic case to try the new remedy on. Dr. Hallopeau also recently states "that iodide of potassium, in opposition to the generally received opinion, exerts a well-marked effect on the chancre."

Without claiming any originality in the matter, this marked effect on the chancre and lymphatic glands was pointed out in this country, and also in Italy 14 years ago,[2] and again 8 years ago;[3] but, like inorganic or organic arsenic in average cases of early syphilis, I do not at this stage pin my faith on potassium iodide as on mercury as a real curative agent, although it is potent in the removal of induration. Iodide of potassium, like salvarsan, is a good cicatrising agent, and has a powerful action on tissue metabolism, and is therefore capable of promoting the absorption of granulation tissue before its conversion into unalterable fibroid tissue. This would *ipso facto* allow local applications and bactericidal agents normally present in blood to have freer access to the spirochætæ. Mercurial inunction applied nightly to large indurations can effect a similar result and expedite local resolution. This local treatment and reduction of induration in the chancre is very important, and without doubt minimises the occurrence of relapsed chancres. It assists other medication to attack the spirochætæ embedded in fibrous tissue, and if "granule shedding" can "naturally" occur in spirochætæ local recrudescences of the chancre are thus explicable when treatment, local and constitutional, is not sufficiently intensive. It is necessary, however, to distinguish between aborting and modifying syphilis. Sir Jonathan Hutchinson has repeatedly pointed out that mercury administered in the primary stage in the manner recommended by him can effectually modify syphilis in many but not in all cases. He writes: "I never expect to see secondary symptoms now if I have seen the case before we begin."[4] It is common knowledge that if we push mercury in the first three months from contagion the patient declines in many instances to believe he has had syphilis because the secondary symptoms are so modified.

SALVARSAN.

Dr. Levy-Bing, whose work I saw in Paris a month ago, and who has given over 500 injections of salvarsan intramuscularly and intravenously, informs me that in the numerous cases in which he has tried it salvarsan does not ever abort syphilis even when given in four weekly doses of 0·6 gramme in the primary stage. Further, that nervous affections and severe relapse are very common six to seven months later, unless mercury is also prescribed. He mentioned two recent cases where meningitis, facial paralysis, and extensive skin eruptions had shortly appeared from his omitting to follow up the salvarsan with mercury. Dr. Levy-Bing speaks not only from the clinical but from the pathological point of view. He uses the ultra-microscope and performs a Wassermann test every two months. He finds that salvarsan in some instances produces a negative Wassermann test more quickly than mercury, but that it rapidly becomes positive again.

Mr. McDonagh states that he has "had 3 cases within the last 12 months of men early in the secondary stage cured by salvarsan return with a diffuse macular rash ..... which appeared a few weeks after the patient noticed the site of his original sore swell and become red." He considers that this certainly speaks for the efficacy of salvarsan, and states that "within the short time it has been in use already 7 cases of an undoubted re-infection have been reported." In the army such cases have not been regarded as cures or as re-infections, but are usually marked "relapse" in the syphilis register and sent into hospital for more intense and thorough treatment. Without in any way wishing to detract from the undoubted value of salvarsan in certain phases of syphilis, it is noticeable that in early syphilis, after using soamin and arsacetin, a similar condition of affairs occurred. There was marked temporary improvement and a gain in weight, but permanent benefit did not accrue, and relapses were early and severe. It is only three years ago that we were informed that[5] "Injections of soamin can be looked on as prophylactic in the majority of cases against any further development of the disease if given early and in sufficient quantities." On the evidence of cases treated at Woolwich I disputed this view at the time.[6] Eighteen months later, in March, 1910, an expert medical committee at the War Office stated as a result of impartial evidence collected from six large stations, "that the utility of these preparations (arylarsenates) as a prophylactic against syphilis has not been proved, and does not recommend their administration for that purpose."

There is abundant evidence to show that, like the arylarsenates, the claim of salvarsan to abort syphilis has not been substantiated. Applied locally it acts like a caustic

* Lecture I. was published in THE LANCET of Nov. 11th, 1911, p. 1315.

and expedites healing of the chancre in early syphilis, but other forms of local treatment have also this effect. It is useful to inject salvarsan early to expedite the healing of primary lesions, especially amongst prostitute women, and rapidly follow this up with our *pièce de résistance*—mercury—as the real curative agent.

LOCAL TREATMENT.

Metchnikoff claims to have successfully inoculated the treponema pallidum and prevented syphilis by the early application within 24 hours from contagion of an ointment of calomel 10 parts and lanoline 20 parts. The use of soap or vaseline prior to coitus and washing with any antiseptic lotions immediately afterwards are also of great prophylactic value, and have been long recognised. Any oily substance would tend to block the minute orifices by which the micro-organisms gain an entry, and also tend to lessen the risk of abrasions caused by coitus. Cauterisation rapidly converts an unhealthy sore into a healing ulcer, stops phagedæna, tends to limit bubo formation, and expedites recovery. The application of a caustic does not in reality alter the nature of an infecting sore, and the condition of the adjacent lymphatics nearly always comes to our rescue. Further, a rash occurs in syphilis, whether the chancre is cauterised or not. I consider that non-infecting sores (soft chancres), if unhealthy-looking or discharging, should be touched with pure carbolic acid, which is comparatively painless, on admission and every third day, according to the indication of the particular case. Chancres, unless phagedænic, need not be touched if indurated and not ulcerated, or if they bleed profusely before and after touching, since such bleeding, as in simple inflammation, is a sign of commencing resolution. Many writers have advised the withholding of mercury in cases of phagedæna. I admit that caution and judgment are necessary. Local treatment by nitric in preference to carbolic acid, free exposure, prolonged baths, diet, and stimulants ordinarily suffice for phagedænic ulcers, except when the nearest glands are typical of syphilis, when mercurial inunctions should be used. A lowering treatment would have an unquestionably bad effect, whether dietetic or medicinal, especially if mercury is given when syphilis is non-existent.

MERCURIAL TREATMENT.

During the past 18 years my work has been almost exclusively confined to treating venereal diseases in large military stations at home and abroad. During this period I have extensively tried most of the recognised modes of mercurial administration, by the mouth, by inunctions, by injections, and by calomel vapour baths.

In the army, in the case of in-patients who are necessarily in hospital in the chancre and rash stage, we are chiefly concerned in trying to arrive at what best holds the syphilis in check. In the garrison of Woolwich in the year 1904 intramuscular injections of insoluble grey oil were ordinarily used for in-patients, and the inauguration of the out-patient system throughout the army dated from January of that year. In 1904 there were 331 admissions for syphilis, the average number of men constantly daily sick in hospital throughout the year with syphilis being 56. In October, 1905, inunctions of ung. hydrarg. and baths were commenced for in-patients, weekly grey oil injections being reserved for out-patients. There was a steady decrease in syphilis. In 1908 there were 53 admissions for syphilis, the average number constantly sick in hospital being only six. The following table shows these facts at a glance for the years 1904–1908:—

TABLE I.—*Syphilis: In-patients, Woolwich.*

Year.	Average daily strength of garrison.	Admissions: actual number.	"Constantly sick": actual number.	Ratio per 1000.	
				Admissions.	Constantly sick.
1904	5311	331	56	62·32	10·70
1905	4966	202	30	41·49	6·14
1906	5096	129	14	15·12	2·72
1907	4702	87	13	18·50	2·71
1908	5666	53	6	8·75	1·28

In 1904 grey oil intramuscular mercurial injections for in-patients and out-patients. In 1905–08 mercurial inunctions for in-patients—injections for out-patients.

I now come to the question of relapse. In Malta, in December, 1909, in a garrison of 6300 soldiers there were 171 cases remaining on the syphilis register under treatment by mercury, first as in-patients and later as out-patients, for syphilis, and out of these 31 suffered from relapse during the year 1909. In December, 1910, in a garrison of 6800 soldiers, there were 160 cases of syphilis remaining under mercurial treatment, with 21 relapses during the year 1910. These figures for relapse cases for the years 1909–1910 at Malta included men developing tertiary or other late manifestations of syphilis 5 to 10 years after contracting the disease. These figures embraced numerous transfers from other stations, foreign and home. Some of them were severe cases in men suffering from malaria, or the effects of tropical stations. Relapses were very unusual early in the disease. Syphilis cases in Malta, as at Woolwich, are ordinarily treated by inunctions of mercury in hospital in the primary and early secondary stage, and later, for military convenience, by injections of grey oil for out-patients. In 1911 the results are still better, and in a garrison of 7000 troops there is only one case of syphilis at present in hospital (a recent arrival with a severe throat relapse under salvarsan). There are 160 syphilis cases on the register doing their full duty free from any external manifestation of the disease. These figures compare favourably with those of any garrison in the world, and are a lasting tribute to the judicious use of mercury. Time prevents my dealing more fully with the clinical aspects of the relative merits of various modes of administration of mercury. They have received a great deal of attention lately.[7]

EFFECTS OF TREATMENT ON THE WASSERMANN REACTION.

To turn to the pathological aspect. We were asked to accept the Wassermann test as the real arbiter of the value of the various methods of administration of mercury and salvarsan. We will see, therefore, what recent reports tell us on these important points.

Mr. H. W. Bayly, pathologist London Lock Hospital, states that "82 per cent. of cases treated by inunction and 35 per cent. of cases treated by injection showed some effect of treatment after only three months." As far as he has gone, therefore, his conclusion is that inunction is the best form of administration of mercury, and he further gathers that Mr. McDonagh's large continental experience leads him also to this opinion. "Calomel injection seems much better than pill treatment, but not so good as inunction, as estimated by the Wassermann reaction. Potassium iodide and the arylarsenates have no effect on the Wassermann reaction, as far as three months' treatment is concerned." Neisser finds that iodide of potassium has an action on the Wassermann reaction.

At a meeting of the British Medical Association in 1910 Mr. McDonagh (London Lock Hospital) stated that "a patient should, before the disease has become generalised, receive the most active and vigorous form of treatment possible. Mercury, in the form of inunctions, is more potent in this respect than when given in any other form." Working at the Wassermann reaction on the continent he found that it was "almost a rule to obtain a 'negative' reaction after a patient had had a course of inunctions, or less frequently injections." As this bacteriologist has applied the Wassermann test in over 5000 cases his words carry very great weight, and he speaks from the clinical as well as from the pathological point of view.

Taking the Wassermann reaction as our test, Table II. indicates the ultimate effect on syphilis after a year, as distinguished from the immediate effect. Mercurial insoluble injections are contrasted with salvarsan injections on the Wassermann original reaction. The figures are some of those published by Major L. W. Harrison, who has probably done more research work on these points than any one else in this country.

Judging from this table it would seem that after a period of about one year from contagion mercurial insoluble injection appears to be as efficacious as salvarsan as judged by Wassermann's original test, which is considered to be the standard. The course of mercurial injections employed, however, was extremely mild, and is recently obsolete in the army. A more intensive early course was introduced two years ago, and this may be productive of better results in future. Major Harrison states that "possibly injections may not be the best form in which to administer mercury." If so, it would appear wiser to test other mercurial methods before

TABLE II.

Tested after—	Results obtained by Wassermann's original test.		
	Total cases.	Positive.	Negative.
End of third course of mercurial injections (11th month). 14 injections in all given...	79	42	37
End of fourth course of mercurial injections (15th month). 18 injections in all given...	101	32	69
Three to 11 months after the last injection of salvarsan...	99	33	66

discarding them. Inunctions thoroughly applied in early syphilis appear to have a much greater effect on the Wassermann reaction.

Amongst a further series of 129 cases tabulated at the same time, in which salvarsan was used when mercury is reported to have failed,[9] it is observed that mercurial inunctions were only used in 8 instances, and merely as part of a mixed treatment in which inunctions took a minor share. There were 35 tertiary, malignant, parasyphilitic, or brain syphilis cases. These were unusually severe cases selected from other stations or those in which certain methods other than inunction had failed.

It is interesting to note in this connexion that Professor Fournier's valuable statistics on tabes in 1891 were based on "mercurial" methods other than injection.[10] He gives the statistics of 321 cases of tabes thus: 15 cases, no treatment; 8, potassium iodide, no mercury; 285 were treated by mercury, or more often a combination of mercury and iodide. Of these 285 cases, 70 were treated from a few days to two months, 108 from three to six months, 51 from seven to 12 months, 23 about 12 months, 20 from one to two years, 5 from two to three years, 6 for three years, and 2 for four years.

Sir David Ferrier says that "these statistics favour the view that a still more thorough and effective treatment might prevent the development of tabes altogether. ..... As regards salvarsan we had better 'wait and see.'"

Salvarsan was only placed on the market in December, 1910, and has not been issued for use to troops at Malta, so I am obliged to quote from the experiences of others. Major Harrison, in London, who received a free issue in July, 1910, had 18 clinical relapses amongst 115 cases of syphilis. In 31 instances the Wassermann test became negative after the use of salvarsan, but returned to positive. This occurred within a period of 3 to 11 months. Cases were selected for salvarsan treatment which had at least one year to serve. The results, therefore, on clinical grounds, if we accept relapses as our test, are apparently no better than with mercury.

Dr. Karl Lange[11] summarises the results of Wassermann reaction after salvarsan treatment in 268 cases of syphilis representing more than 2000 determinations at the Rudolf Virchow Infirmary. Eighteen cases, including one case of malignant syphilis and one of tabes, were negative before treatment. Nine cases were also negative where mercury had been used previously to salvarsan, and remained negative after salvarsan. Two cases of primary sore injected during exhibition of negative Wassermann also remained negative. Five cases of tertiary syphilis became positive after injection, and one died with a positive reaction. Ninety-seven cases remained positive after the salvarsan injection, of which 54 were absolutely unaltered. Amongst these, two adults and six children died during the positive period, although in these cases the degree of reaction had been partially reduced before death. Thirty-four cases exhibited a distinct reduction in the positive reaction during a period of observation extending over five weeks, but did not become negative. One case of severe laryngeal syphilis exhibited a strongly positive reaction for six weeks in spite of repeated injections of salvarsan. Neisser found that in only 10 per cent. of cases treated by salvarsan a positive Wassermann was changed to negative, and he pointed out that "the reaction cannot decide whether the cure is permanent or not." He pleads for "a combined treatment with these injections and mercury or iodide of potassium," and recommends the use of mercury for three years. Professor Werther, who has treated some 350 cases with salvarsan, states that "in cases treated by him in October, 1910, only 12 per cent. gave a negative Wasserman. ..... The combination of mercury with salvarsan has a more rapid effect on the reaction than a second dose of salvarsan." Professor Ehrlich states that "in some cases a negative reaction may be present, but after an injection of '606' the reaction becomes positive." If this is so, one naturally asks what is the potential value of a Wassermann test in syphilis, as the figures of Dr. Karl Lange previously quoted, and those of numerous other independent observers, indicate that a large bulk of the cases remain positive, whereas with mercurial inunctions they have been proved to become negative. One assumes that to obtain a negative reaction is the object of the Wassermann test and our guide to the relative therapeutic value of the remedy. This is the usual criterion of all pathological reports when attempts are made to assert the superiority of salvarsan over mercury.

As regards mixed treatment by salvarsan and then mercury and iodide of potassium, a similar plea was put forward with atoxyl, soamin, and arsacetin; and atoxylate of mercury was later evolved by Uhlenhuth which has proved of very little use. Dr. G. Pernet refers to "therapeutic rockets which come down like sticks," and Mr. C. F. Marshall considers that "an attempt is made to break the fall of salvarsan by a parachute of mercury and iodides." If "606" is to become a substitute for mercury it must be judged on its own merits. An adjuvant is a different matter, and as such salvarsan, according to the literature, appears to have a definite place in selected cases, mainly in those in which iodide of potassium was formerly used. The almost universal trend of opinion now is that salvarsan is not to be considered a substitute for mercury in average cases of early syphilis. The effect of this drug on induration in the chancre and the induration in the lymphatic glands is reported by numerous observers to be slight and not nearly as marked as with mercury. Such induration and enlarged glands are the repositories of syphilis, and, if not thoroughly reduced, relapse is usually ensured. The therapeutic action of salvarsan may be brilliant, but the effect is temporary judging by clinical reports and the evidence of the Wassermann reaction. In parasyphilis salvarsan is of little avail, judging by published opinions. In certain ulcerative conditions, in malignant, laryngeal, and tertiary syphilis, salvarsan is valuable, also in mutilating syphilis where phagedæna attacks the lesions, or in persons suffering from mercurial poisoning resulting from injudicious administration.

COMPARATIVE TOXICITY OF ACTION.

In a recent review on the "Experimental Chemistry of the Spirilloses"[12] it is stated: "We have for a long time had in mercury a specific remedy for syphilis, but a great disadvantage consists in its intense toxicity in relation to curative action." Is this impeachment of mercury fair, is it true?

As regards relative toxicity of action, there are 35 recorded deaths under salvarsan quoted in English literature[13] in a period of a little over a year. Dr. Levy Bing informed me of two other deaths under salvarsan in Paris in the week preceding my arrival, and four deaths previously, none of which had as yet been published. They did not occur amongst persons *in extremis*, but, I gather, amongst otherwise healthy adults. He is of opinion that the total number of deaths under salvarsan probably amounts to 70 or 80 persons.

Intravenous mercurial injections were introduced in 1864 by Scarvenzio and gave rise to some toxic signs, including death, and for this reason were discontinued. In a recent book on salvarsan Mr. J. E. R. McDonagh states that under mercurial injections the deaths number 70. The cases, however, are not quoted or the references given; I can only trace 26 under intramuscular mercurial injections.[14] These deaths under mercury date from 1864 and occurred over a period of nearly 50 years in a much larger number of cases. The toxicity of salvarsan, therefore, would appear to be at least equal to, if not greater than, that of mercury, quite apart from other recorded toxic signs. In the British Pharmacopœia both are classed amongst the poisons.

The occurrence of cancer after the use of arsenic was recently brought forward by Sir Jonathan Hutchinson. This is at present *sub judice*. One drawing on the table from

the College Museum shows an extensive dermatitis and so-called psoriasis directly due to arsenic.

The question arises whether salvarsan, the most recent organic preparations like atoxyl, is decomposed in the system into inorganic arsenic. Dr. J. M. Fortescue-Brickdale (lecturer on pharmacology, Oxford) states: "In man the excretion of atoxyl usually amounted to 50 to 90 per cent. within nine hours, partly as atoxyl and partly in another form, the latter being found in the urine for several days. The atoxyl retained in the body is to some extent decomposed, so that after a sufficiently long time enough inorganic arsenic is formed to produce the ordinary toxic symptoms. When atoxyl is applied to the treatment of syphilis, chorea, or any of the grave forms of anæmia, there is no evidence that any further action takes place than can be ascribed to the gradual splitting off of inorganic arsenic, and thus no advantage is gained in giving a rapidly eliminated form in large doses rather than one which, being slowly excreted, can be given in small ones."

I have used in selected cases of syphilis Donovan's and Fowler's inorganic arsenical preparations by the mouth for 18 years with great success. Others testify to their value, and they have existed in the British Pharmacopœia for 50 years. They are apparently less toxic, as no death is known. They are most valuable in late secondary or tertiary manifestations, and in cases where malaria exists in association with syphilis. Sanatogen, which is organic phosphorus, is also valuable in severe and malignant syphilis, and causes a rapid gain of weight, when cases previously unbenefited by mercury or potassium iodide rapidly improve, and these drugs can then be given with advantage.

Mr. Ernest Lane has drawn attention to certain difficulties in the technique which occurred with intravenous mercurial injections. These, no doubt, can be obviated, but the veins may be friable in syphilis, and in one instance that I saw the entry was only made after 11 attempts on the veins of both arms by an experienced man.

Some Canons regarding Results of Treatment.

In forming an opinion on the relative value of different drugs in treating syphilis the following canons may prove useful: First, the drug must be tried alone and judged on its own merits. Secondly, the manifestations of early syphilis, more especially induration in the chancre, must be removed in four to six weeks, and glandular enlargements, when they exist, must be rapidly reduced in three months from contagion. Mercury can do this. Thirdly, the result of the Wassermann original reaction should be recorded at three, six, and nine months, if this test when the technique is standardised is later accepted as conclusive evidence of syphilis. Fourthly, the recurrence of symptoms or relapse within the first 6–12 months from contagion must be noted, bearing in mind that a large number of cases of syphilis are often very mild and may not relapse even with an entire absence of treatment until parasyphilis occurs. Fifthly, the later occurrence, or otherwise, of tertiary manifestations and parasyphilis recorded. Sixthly, the mortality.

Before discussing some general considerations I draw your attention to some drawings of yaws on the table. This is a disease closely simulating syphilis, but due to a different spirochæta. In connexion with remarks in my first lecture on the varieties of spirochætæ found in primary syphilitic chancres, it is possible that we may find different types of syphilis due to other spirochætæ, just as varieties of trypanosomes are found.

Observations on Treatment.

As far back as 1786 John Hunter condemned "the ungrateful and unsettled mind of man" in his endeavour to obtain a substitute for mercury in the treatment of syphilis. He wrote: "If there is such a thing as a specific, mercury is one for the venereal disease ..... yet mankind are in pursuit of other specifics for this, as if specifics were more common than disease."[15] If for the word venereal we substitute early syphilitic disease, then Hunter's words are as true to-day as at the date when they were written. In amplification of Hunter's words the following facts require consideration before we lightly dismiss mercury in favour of arsenic. The grave effects of syphilis are largely due to the original intensity of infection, to personal susceptibility to the action of the virus from lowered general health, to racial susceptibility, to intemperate habits, to the neglect of early treatment, and to the injudicious use of mercurial preparations. The primary and early secondary stages run a definite course, and no line of treatment can absolutely prevent the evolution of manifestations, but good treatment in hospital in the early stages markedly ameliorates the general blood condition.

Owing to our ignorance of the laws of assimilation and elimination, it is unwise to give the patient in any stage as much mercury as he can stand, because this practice, though advocated by some persons, constitutes an abuse of the drug. This may result in mercurial stomatitis, or mercurial stasis and poisoning, from at first being unduly accumulated and later too suddenly eliminated. This would also affect the general health, which is a most important consideration, as the manifestations of syphilis are usually in inverse ratio to it. Treatment should, I think, be directed towards enabling the patient to take the drug by regulating elimination, and inducing an increase of metabolism by baths, food, and general exercise in the fresh air. If the bactericidal properties in the blood are to effect the cure of syphilis, this must necessarily result from increased metabolism due to the careful administration of mercurial or other preparations. As a result of such administration the lymphatic glands become reduced in size, and so continue their depurative and eliminatory function. When this fails they break down and suppurate. This result is not infrequently seen in neglected or badly treated syphilis. Too long a continuance of a large dose in any form creates a markedly retrograde effect, and gives rise to anæmia, loss of weight and general condition, as well as acting as a systemic poison, and it probably prevents antibodies forming in the blood. The factor "general condition," when adequately maintained, has no doubt as powerful an effect as the mercury in improving the status of the red blood corpuscles, and in eliminating the syphilis by improving the tone of eliminating organs, such as the liver, kidneys, and skin. "If blood counts be made it will be found that the count of red cells and the amount of hæmoglobin increase during the first three weeks of mercurial treatment begun when secondary manifestations of syphilis have occurred. After that time if mercury is still given the hæmoglobin and, later, the number of red corpuscles begin to decline."[16] Hydrotherapeutics and electro-therapeutics are useful adjuncts to a mercurial course, and a valuable complement after it.

Before iodide of potassium is administered the question of renal sufficiency should be adequately gauged. If albumin is present or the quantity of urine is insufficient the iodide eruptions are likely to occur, and hence the value of free dilution of the drug together with hot-air or electric-light baths. These exercise a markedly beneficial effect on the kidneys and assist elimination by the skin. The headache and osteocopic pain of early syphilis may rapidly yield to potassium iodide alone or in combination with mercury, and a pustular syphilitic rash is markedly benefited. The drug may give rise to headache if albumin is present in the urine. Potassium iodide is more obviously beneficial the further the stage from primary infection, and its use, therefore, is imperative in the late secondary and tertiary stages or in any manifestations, however early, such as malignant syphilis presenting the attributes of those stages. This drug is most valuable in cases of early syphilitic orchitis, in periostitis, nodes, gummata, gummatous ulcerations, and in threatened brain or cord lesions. Patients who are intolerant of small doses, such as gr. v., may take a larger one with impunity. The drug is best borne about an hour after meals in dilute solution in such vehicles as water, milk, and sarsaparilla. The depressant action is best avoided by prescribing it for short periods of 10 to 14 days at a time, and in solution with ammonia carbonate, and by administering the large dose at bedtime and avoiding its use in the early morning. It is then not so likely to derange digestion or cause depression. A course of a month once a year is valuable as a precautionary measure against parasyphilitic affections, and is strongly advocated by Sir William Gowers. The drug, as a matter of routine, should always be given as the complement of the mercurial course, since it is generally believed to assist in the gradual elimination of the accumulated mercury, and so guard against mercurial stasis and poisoning. It should not be given when mercurial poisoning has actually occurred. It also acts, especially when combined with sarsaparilla, by relieving the liver and kidneys, which may be chronically congested or lardaceous. Potassium iodide can remove the barricades of nascent fibrous tissue in which the syphilitic virus or its toxin is no doubt lodged in latent and later stages, and thus permits the leucocytes to

enter and effect the removal of the virus or its products, and this explains the lessened anæmia of the patient in suitable cases. The drug often rapidly reduces the enlarged glands, and its moderate use, therefore, causes a more healthy tone of tissues, blood, lymphatics, and organs, which can then more naturally overcome the localised effects of the spirochæta. In certain stages of threatened brain syphilis which have been neglected in the early stage mercury may prove more valuable, but commonly in "syphilis grave" or in "malignant" syphilis mercury may prove quite useless, and general condition is the first consideration.

Quinine in dilute acid solution is often most valuable precedent to, or after, the first mercurial course in cachectic cases. Whether it exerts a specific action on the treponema pallidum as on the malarial parasite is uncertain, but I always temporarily substitute it for mercury if there is an associated malarial history or if syphilitic fever is present. As early syphilis is associated with a loss in numbers of the red blood corpuscles and in the amount of hæmoglobin in these cells, quite possibly its chief action may be in overcoming the degenerative action, and thus assisting the blood to deal with the inroads of the virus in the early and more remediable phases of the disease by an increase in its phagocytic power or by the formation of antibodies. Cod-liver oil and iron are similarly valuable for their hæmatinic powers. Any drug, however, or any means which tend to reduce the number of spirochætæ in the system in the early stages, will consequently lessen the amount of toxin produced which can later injure the central nervous system and give rise to parasyphilitic affections.

The very greatest advantage may accrue from a cessation of mercury or potassium iodide and the substitution of other tonic remedies. I think that this is more especially the case in alcoholic, scorbutic, anæmic, malarial, or tubercular subjects, and in malignant syphilis. There is no class of disease in which the beneficial results of judicious and early treatment are so marked as in syphilis. If the remedy used is doing good the result is early apparent and the manifestations of the disease disappear; if, on the contrary, the manifestations are stationary or growing progressively worse the remedy is inadequate and fresh methods should be essayed, either by an increase or decrease of dose or the substitution of other drugs and remedies. If there are ulcers in the throat or mouth local treatment is requisite, and a minced meat or stew diet is essential to successful results. Otherwise the patient tends to lose weight if he is unable to masticate or swallow too solid food, and mercury would only aggravate matters. Success more often depends on maintaining the strength by the judicious use of stimulants and nutritious food than on drugs. This is especially true in cases of iritis, severe throat lesions, necrosis of bone, and in malignant syphilis.

PROPHYLAXIS.

Coming to the important question of prophylaxis, there are two essentially different modes of State intervention. First, the system known as Regulation, which implies registration and attendance. The second mode is "to require doctors and others to notify all cases of actually existing disease in persons of whatever class or sex to the health authority, who inquires into the means of segregation and treatment (as in the case of other infectious diseases) and is empowered to remove the patient to hospital if necessary." In the case of poor persons this implies a certain outlay for hospital accommodation and food, but it pays the State a hundredfold. Notification is not unequal between men and women, nor does it unduly encourage immorality. Inquiries extending over 20 years in Brussels elicited the fact that amongst 1523 out of 3505 women the primary cause of prostitution is poverty. If, therefore, prostitution is mainly dependent on poverty, and it is impossible to remove the latter, prostitution must be supervised. The late Dr. Parkes said: "In the case of venereal diseases the State must as much protect its citizens as from the danger of foul water or the risks of any other perilous and unhealthy trade."

I have outlined elsewhere the prevalence and some of the fundamental facts on which the "control of venereal diseases at their sources in civil communities" is dependent.[17] It is merely desired to point out now that in India, where control has existed since 1897 under the Cantonment Act, venereal diseases have steadily decreased year by year in the 70,000 British troops always stationed there amongst a native population of 300 millions. In 1895 in India the admissions to hospital for all forms of venereal disease reached the enormous total of 537 per 1000 of strength. In 1908 the admission-rate was only 70 per 1000, and yearly less since. In 1897 there were 661 invalids from India to England for venereal disease, and in 1908 only 59 invalids.[18] In 1895 there were over 3000 soldiers (three regiments) constantly sick in hospital with venereal diseases; and in 1908 only 500. This is an enormous saving in men and money, as a trained soldier landed in India costs the State £100. Coming to the civil aspect in England, A Royal Commission on the Blind, the Deaf, and the Dumb, which reported to both Houses of Parliament in the year 1889, estimated that about 7000 persons in the United Kingdom had lost their sight from ophthalmia neonatorum, and assessed the cost to the State for these cases of preventable blindness at £350,000 a year. This disease is recently notifiable. Syphilis is directly responsible for about 12 per cent. of all male admissions to lunatic asylums. This is independent of the cost of maintaining cases in workhouses and infirmaries.

When quite a young man I expressed the view that it was quite feasible to stamp out syphilis if the necessary measures were taken.[19] The ideal of my youth has borne fruit in my old age. At Malta freshly contracted syphilis has been practically stamped out during this year, and recently soft chancres very nearly so. In the year 1911 to date there have been only three or four cases of freshly contracted syphilis amongst troops at Malta. In 1909 there were 87, and in 1910 35 freshly contracted cases. There is only one "venereal sore" case at present in hospital. The troops number 7000. An equal number of sailors of the Royal Navy arrive periodically, and the population of the island is a quarter of a million persons. It is not proposed to weary you with statistics, but merely to mention how this has been done: (1) Confidential notification applied to both sexes; (2) segregation of diseased men and women in hospital in the early contagious period of disease for a few weeks; and (3) prophylaxis by efficient in-patient and later out-patient treatment.

You will say, "Ah! but the clandestine—how do you control her? It is she, and not the professional prostitute, who spreads syphilis five times out of six." This may be so in large cities, and it is very difficult to control, but this is an insufficient reason for doing nothing. No one asks for the Contagious Disease Acts to be reapplied to 12 towns in England, but common sense in dealing with these matters would appear to suggest that some form of public health control should be exercised in all towns, since the disease in question is worse than small-pox. The following are very practical suggestions:—

1. Rigid suppression of solicitation in the streets by women, or by men, who act as middlemen and finance the situation, or live on the earnings of women. Police action is possible under the Town Clauses Act of 1847. The Act is applied in London, and the police have power to arrest persons soliciting without the person solicited being called on to give evidence.

2. The prostitution of girls under age should be suppressed. At the St. Lazare Hospital, Paris, minors are separated from the elder women in the wards and in the chapel.

3. Complete and compulsory courses of instruction in venereal diseases should be instituted in every university so as to ensure the training of really competent practitioners.

The foregoing were among the main recommendations of an International Conference in Brussels in 1899.

In conclusion, the St. Lazare Hospital, Paris, built in 1683, first convent, then prison, now part hospital, part prison, has 1000 beds for the lower classes of diseased prostitutes. There is a life-size, gruesome picture over the chapel entrance of a dead prostitute being carried out in solemn state for burial. The picture, no doubt, is placed there to remind those who enter that "The wages of sin is death." The Scriptural reading, however, appears more humane, "Let him who is without sin cast the first stone."

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Clinical Lecture
ON
COLOTOMY
AND
SOME MISCONCEPTIONS OF ITS RESULTS.

Delivered at Charing Cross Hospital

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GENTLEMEN,—There are few operative measures that engender in the mind of patients, nurses, and practitioners so much dislike as colotomy. The reason for this is not difficult to understand; yet this is eminently a life-saving and pain-saving procedure, and its evil repute is, I am quite convinced, not justified. I would go further and say that the discomforts and disadvantages of colotomy are unduly magnified. Indeed, evils which are in no way due to the artificial anus but depend upon other factors are laid to its account, and it is the sifting of these quite extraneous evils from those inherent to the colotomy itself, and the placing of them where they rightly belong, which is my purpose to-day.

I do this because I know that the fear or dislike of colotomy leads to a great deal of unnecessarily prolonged suffering, and even to painful and torturing deaths, for no one can deny the agony of a death by intestinal obstruction. I would say, boldly and without hesitation, that many of the defects or disadvantages attributed to colotomy are so attributed from erroneous conceptions of their origin, and from ignorance of the nature of the function of the sigmoid and rectum.

Even such an apparently old subject as the anatomy of the sigmoid and rectum, as taught even now in quite "up-to-date" books, is wrong, in view of recent research by modern methods and advantages—I mean the gross anatomy; while the character of the vermicular action of the large bowel has hitherto been quite misunderstood, and upon this misconception I must strongly insist, because the normal expulsive movements of the large bowel are so exceedingly sluggish that they could not possibly give rise to diarrhœa even in the absence of a sphincter: diarrhœa means abnormal stimulation of the peristalsis, and not loss of sphincter control.

SUPPOSED DISABILITIES ARISING FROM THE OPERATION.

Let us first see what the supposed disabilities consequent on colotomy are:

1. Loss of the sense of desire to defæcate—i.e., warning.
2. Excessive number of actions—i.e., diarrhœa.
3. Loss of control over defæcation.
4. Excoriation of the skin.
5. The wearing of an apparatus.
6. The presence of an artificial anus on the abdomen.

The latter two are inevitable, but in practice they are really the minor of the evils, and if the former disabilities are reduced to a minimum the wearing of an apparatus is a small penalty to pay for relief from pain and the peaceful prolongation of a life—a life which may be valuable and useful.

To come to actual facts, therefore, we find that it is the inability to know when the bowel is going to act and how often it is going to act per diem which are the two great practical factors, because the amount of skin excoriation is largely dependent upon these conditions.

SENSE OF WARNING.

Now everyone attributes the loss of warning to the fact that in colotomy the bowel is opened above the sphincters ani. This is entirely erroneous. The sense of warning in no degree depends upon the sphincters ani, but chiefly upon the relaxation of the lower sigmoid sphincter, which exists where the pelvic colon (sigmoid) joins the rectum. The relaxation of this coincides with the passage of the fæcal mass from the sigmoid into the rectum.

It must be remembered that the rectum is normally quite empty. Certainly the lower half (ampulla) is accepted by all authorities as being empty, normally, and that the lower part of the pelvic colon or sigmoid is the fæcal reservoir, where the normally inspissated content of the large bowel rests until it is expelled, which in normal persons is every 24 hours.

In so far as the warning preceding defæcation is concerned, therefore, its loss depends, not upon the absence of the rectal sphincters, but of the loss of the sigmoid sphincter. However, there is evidence to show that sensory stimuli must precede the relaxation of the sigmoid sphincter—analogy alone would suggest this; and that these sensory stimuli originate, not only from the mucosa covering the sphincter of the sigmoid, but from a large extent of the sigmoid mucosa; hence the loss of the sigmoid sphincter with its mucosal covering does not remove all the sources whence the premonitory sensory stimuli preceding defæcation arise.

Clinical evidence, derived from the sensations of patients who have colotomies, clearly shows that most of the successful cases have very definite warning of the impending action of their colotomies; while others learn by certain sensations peculiar to each, and which are not normal warnings, when their bowel is going to act. Hence, even though the acutest warning of the impending action of the bowel is superseded by the performance of a colotomy, all warning is not cut off, or if it is "auræ" develop which efficiently replace the warning. Consequently, we cannot maintain that one of the great disabilities of colotomy is the inability to know when the bowel is going to act.

HOW OFTEN IS THE COLOTOMY GOING TO ACT (DIARRHŒA)?

This is the great difficulty with colotomy, and it is usually entirely attributed to the loss of the sphincters ani.

Cause of Diarrhœa.

First, consider what this means. In effect this explanation of diarrhœa in colotomy says the fæces run away from the bowel because the colostomy opening has not a sphincter, like the normal anus, wherewith to restrain the fæces. This is an entirely wrong explanation. The chief reason the patient has diarrhœa, or even why he has more than one action, or at most two actions, of the bowel per diem, is that the mucosa of his colon is chronically inflamed—i.e., the patient has always some degree of colitis. The best proof of this assertion is the result of treatment. Cure the colitis or remove its cause and the diarrhœa ceases, yet is the patient still minus a sphincter. So it was not the absence of the sphincter which formerly permitted the diarrhœa.

Is this assertion reasonable? You have only to follow the reasoning to its logical conclusion to see that it is so. In the person whose sphincteric apparatus is intact—sigmoid and anus—the presence of colitis in a late stage will result in diarrhœa, and sphincteric action is absolutely incompetent to prevent it—i.e., the diarrhœa occurs in spite of the presence of normal sphincters.

Understand clearly what I mean. A normal person empties the sigmoid once daily. The fæcal mass lies in the sigmoid stationary, not because it is retained there by a sphincter, most certainly not by the anal sphincters or the levator ani, but because the *vis a tergo*—i.e., the propulsion forwards of the contents of the transverse and descending colon—is very slow and gradual, so that until a sufficient mass of fæces has had time to accumulate in the sigmoid the peristaltic action of the latter remains in abeyance. Hence, for example, the presence in the sigmoid of the débris of the preceding day's breakfast alone is insufficient to excite the peristalsis of the sigmoid, and it is not until the débris of the preceding evening meal has arrived in the sigmoid that the total bulk is sufficient to start peristalsis.

The best stimulant to bowel action is distension. When the débris of 24 hours food has collected in the sigmoid the distension it produces suffices to start the process of defæcation, the sigmoid sphincter relaxes, peristaltic action is excited, and the fæcal mass is driven into the rectum, when the desire to empty the bowel becomes imperative and voluntary action is called into play, either to expel the mass or to retain it. This voluntary retention is partly exerted through the sphincters ani and the levator ani.

What happens, however, if the mucosa is inflamed or the muscular coats unduly excited? The débris of each meal as it arrives at the sigmoid is *not* retained at all or only for a short time, but on the contrary is hurried into the rectum and expelled—in short, diarrhœa results, and in spite of normal sphincters. In fact, we find that the sphincters are chiefly expulsive agencies, being essential for the cleanly completion of defæcation.

Apply this reasoning to the patient's case when he has a colotomy. If the surface of the colon is healthy—i.e., free from colitis—the débris of the food will gradually collect and remain in the sigmoid until sufficient bulk has accumulated to excite the normal peristaltic action, when an evacuation occurs. This bulk of stool usually represents in the normal patient the food débris of the preceding 24 hours; hence a second action should not be necessary, or possible even, for another 24 hours.

On the contrary, if the mucosa is catarrhal, the undue stimulation excited partly by the excess of mucus, partly by the excess of flatus which is almost always associated with catarrh, and by the muscular stimulation produced by the toxins present, all these stimuli result in excessive peristaltic activity of the bowel wall; hence inability of the sigmoid to retain the débris of more than one meal (or even less than one meal) which is expelled from the bowel as soon as it arrives instead of lying in the sigmoid until the débris of the 24 hours has collected, when a normal stood would result. So we see that diarrhœa in colotomy is not due to the absence of a sphincter. It would, indeed, be a mighty sphincter which could for long retain the stool in the presence of catarrh—i.e., colitis. That the colotomy is unjustly blamed as the cause of diarrhœa is therefore patent.

Condition of Bowel in Colotomy Patients.

We generally find that colotomy is performed in a bowel already the seat of colitis, either above a malignant growth or a stricture, or infective ulceration of the rectum; often the two latter conditions are part of a process diffused throughout the bowel, and one often most intractable to treatment, and a colotomy may or may not be proper treatment.

Above a cancerous growth the bowel is always catarrhal, and for some time after the performance of a colotomy some degree of diarrhœa will result in these cases, until, indeed, the catarrhal condition subsides as a result of the relief of the chronic intestinal obstruction. When this is attained the bowel will act once, or at most twice, daily. If, however, the catarrhal condition of the bowel is maintained by any cause then the diarrhœa persists, and will persist, till the cause of the catarrh is removed, and for a short time longer.

Oral Sepsis.

The obstruction, and hence the catarrh, produced solely by the growth being relieved by the colotomy, is there usually a cessation of the diarrhœa? I regret to say No, because in most cases there is an additional source of catarrh present. It is to this *additional* cause of catarrh or colitis that most of the inconvenience or evil attributed to the colotomy must be charged; certainly not to the absence of a sphincter. What is the commonest cause of this "residual" colitis? In my opinion it is by far most often due to oral sepsis. So with a not inconsiderable experience of colotomy, I wish to emphasise strongly the proposition *that the comfort of a patient with a colotomy is directly proportionate to the presence or absence of oral or nasal accessory sinus sepsis.*

Site of Colotomy.

Granted, therefore, that this corollary is correct, it follows that the many ingenious methods of endeavouring to manufacture a sphincter "to prevent diarrhœa" are not only unnecessary but are bound to fail to effect this object—not even nature's sphincters can prevent diarrhœa. But inasmuch as it is impossible by any method of performing colotomy known to me to retain the whole of the fæcal reservoir, the sigmoid, the operation, by reducing the storage capacity of the bowel, inevitably interferes to some extent with the normal capacity to hold the accumulation of the 24 hours' food débris, which means that the one normal daily evacuation will be interfered with. The nearer the rectum the colotomy opening is placed the less do we reduce the storage capacity, and *vice versâ*. Hence the selection of the transverse colon as the site of a colotomy is absolutely indefensible, while the historical method of selecting the proximal end of the sigmoid is also incorrect; the question of prolapse apart, the ideal site for a colotomy is the junction of sigmoid and rectum.

Regulation of Diet.

It is because we do reduce the storage capacity of the colon that throughout I have reiterated that a successful colotomy, even in the favourable cases—namely, those free from oral sepsis—may act twice daily. This, however, depends largely upon the quantity and débris-producing qualities of the food partaken, and is to this extent under the patient's control.

If we have so reduced the capacity of the sigmoid that instead of being able to hold the débris of all the four meals taken daily it is only able to retain that of three meals, it necessarily follows that when this amount of débris collects it is evacuated as a stool, while the débris of the last meal of one day is added to that of the following day, and so on. Irregularity of the bowel must result; but if the nature of the food can be so adapted that the amount of débris produced per diem is so reduced as to enable the diminished sigmoid to hold the débris of all four meals, then the one daily evacuation of the bowel is not interfered with.

CONCLUSIONS IN FAVOUR OF COLOTOMY.

We thus see that—

(1) There is ample warning of an impending stool;

(2) If there is no oral or accessory sinus sepsis there is no diarrhœa;

(3) While regulating the diet permits of control of defæcation;

(4) Skin excoriation is very greatly reduced, but as this is also dependent upon the mucus exuded from the exposed mucosa it is not entirely done away with.

REMOVAL OF SOURCES OF PUS.

Before doing a colotomy, therefore, all sources of pus likely to be swallowed must be thoroughly dealt with, and I mean thoroughly, not in the half-hearted manner so often adopted, and inevitably bound to result in disappointment. This will prove the most important of the accessory steps to the operation of colotomy, and should be carried out as soon as it is decided a colotomy is to be done, and must not be left until the time the colotomy is done, unless of course the latter is performed urgently, when, if possible, the mouth or nose should also be attended to—i.e., at the same time.

SOME POINTS IN THE OPERATION.

As regards the actual operation there are two chief points to be considered: (1) That the whole of the fæces must be passed through the colotomy, hence the spur must be effective; (2) that prolapse of the bowel in the future must not take place.

Effectiveness of Spur.

In order to be certain that the spur is effective in the operation usually performed, the mesenteric border of the sigmoid must be at or near the level of the skin. It consequently follows that the whole diameter of the gut lies above the skin, and the surest way of ensuring this is to pass a glass rod though the mesentery to sustain the bowel. This is the most effective way of making a spur; it is also much less painful than any form of stitch (the through-and-through suture is really painful) and it is the least septic also. The glass rod is 4½ in. long, ¼ in. in diameter, and over the two ends are passed ½ in. to 1 in. of rubber tubing to prevent its accidentally slipping out of the mesentery. One of the rubber sleeves is slipped off when the glass rod is finally removed on the seventh to tenth day.

Prolapse.

With regard to future prolapse, it has always been taught that the way to prevent the proximal part of the colon from intussuscepting through the colotomy opening is to pull down the colon until it is "taut"—i.e., until there is no slack part of colon between the place where the colotomy opening is to be made in the bowel and the descending colon where it is bound down to the left kidney. This advice is quite correct, but unfortunately the method removes almost all the sigmoid reservoir and interferes with the desirable state of one daily action of the bowel.

The best method of performing colotomy, therefore, is not so easy to decide; and when it is to be a permanent thing, as in cancer of the rectum, it is still further complicated by the method now in vogue of attempting the removal of "all the lymphatic watershed, including a great deal of the sigmoid

and most of the meso-sigmoid," a proceeding which, in my opinion, neither the anatomy of the part nor clinical evidence justifies.

With regard to prolapse, it is my experience that the constant expulsive effort due to diarrhœa is the most important predisposing factor to this painful and disagreeable complication. Another is the "drawing" effect of even the best made colotomy receptacles, due, I think, chiefly to the want of an air vent, the introduction of which tends to leaking. The more the sigmoid retains its normal function of a reservoir the less the probability of prolapse, and, as I have indicated, we can prevent diarrhœa, hence we can practically remove the most important factor conducing to prolapse.

Prevention of Possible Nipping of Intestine.

In conclusion, I would like to warn you that in performing the operation of colotomy by the so-called "gridiron" method—i.e., the separation of the flat abdominal muscles in the direction of their fibres as we do in appendicectomy—it is wise after making the incision in the tendinous part of the external oblique in the direction of its fibres to notch the aponeurosis at right angles to the fibres, as I have known at least two deaths follow the operation of colotomy, from nipping of the wall of the intestine by the strong tendinous edge of the external oblique of such a severe degree as to lead to a linear band of necrosis of the bowel wall—i.e., there was no effective obstruction to the contents of the bowel, which could be and were expelled by mild laxatives or by passing a tube into the bowel, but death was due to the intense toxæmia which we now know is associated with even a linear necrosis of the bowel wall and the virtual obstruction which is produced, but which in a colotomy one could mechanically overcome. To all intents and purposes strangulation by a band occurs.

THE DIFFERENTIAL DIAGNOSIS OF SYPHILIS AND PARASYPHILIS OF THE NERVOUS SYSTEM.[1]

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FOURNIER was the first to express the opinion that tabes dorsalis is a post-syphilitic disease, and Erb in Germany and Gowers in this country have done more than any other neurologists to support this doctrine of Fournier. Esmarch and Jessen, and later Kjelberg, were the first to call attention to the fact that general paralysis occurred especially in persons who had suffered with syphilis, but it was Fournier who really put forward the doctrine that general paralysis was, like tabes, a consequence of syphilis, and that the two diseases were so similar in their etiology that they might probably be regarded as one disease affecting different parts of the nervous system. The inoculation of a number of general paralytics with no history or signs of syphilis with the virus of a hard chancre without any signs of infection resulting led Krafft-Ebing to postulate the dictum "general paralysis is the product of syphilisation and civilisation."

When I was appointed pathologist to the London County Asylums I found no mention of syphilis as a cause of this disease and comparatively little of other mental conditions in the annual reports. This struck me forcibly, for as a neurologist I had been greatly impressed in my hospital experience with the fact that of all the causes of organic disease of the nervous system syphilis easily occupied the first place. I found that careful inquiry in cases of general paralysis revealed the fact of antecedent syphilis much more than had been suspected; still, the obvious syphilitic residua of scars of gummata and other tertiary manifestations in the body were relatively infrequent. I found that cases of syphilitic brain disease with dementia were called general paralysis, also cases of Korsakoff alcoholic psychosis; but etiologically and pathologically, especially in the light of recent research, these are quite different diseases and can usually be differentiated clinically.

[1] A paper read before the Medical Society of London on Nov. 13th, 1911.

A number of causes were asserted to be the agencies capable of inducing general paralysis, and while not denying that alcoholism, sexual excesses, inherited neuropathic and psychopathic predisposition, worry and excessive mental strain—in fact, all those causes which may lead to neurasthenia, are important exciting factors, yet it is my conviction that syphilis is the essential cause.

It seemed to me that the proof would be afforded if I could collect a sufficient number of cases of juvenile general paralysis in which most of these exciting factors are absent and show that they were the subjects of congenital syphilis. From the numerous inmates in the London County Asylums I was soon able to collect a large number of cases of general paralysis occurring at puberty or early adolescence, and to demonstrate that clinically and pathologically they in no essential respect differed from cases occurring in adults the subjects of acquired syphilis.

Again later, I was able to collect 70 cases of tabo-paralysis and compare the same with 70 cases of tabes dorsalis, and I found among these that the parasyphilitic affection may begin with spinal symptoms or optic atrophy and terminate in general paralysis; or general paralytics may simultaneously with, or successively to, the onset of the cerebral symptoms develop tabes dorsalis, and I came to the conclusion from a research extending over three years that there is one tabes or wasting disease of the central nervous system from an etiological and pathological standpoint. One of the strongest arguments clinically in favour of this view is the fact that the Argyll Robertson pupil is for all practical purposes only met with in these post-syphilitic diseases of the nervous system. Researches in connexion with the examination of the blood and cerebro-spinal fluid, which will be referred to later, confirm this view.

According to some authorities—Bosc, Lesser, Hirschl, Nageotte, and others—general paralysis and tabes are quaternary syphilis; the former authority asserts, and with some degree of correctness, that there is a general similarity even in the lesions of general paralysis and tabes to other syphilitic lesions—viz., there is an endothelial and connective tissue hyperplasia with a tendency to fibrous and sclerous formation. But there is more than this, there is a primary neuronic decay which cannot be accounted for, solely by the changes in the supporting, enclosing, and nutrifying tissues the same as can be done in syphilitic lesions.

The view I take of the pathology of parasyphilitic affections is that in certain acquired or congenital syphilitic individuals the durability of the neurones is greatly curtailed, so that they decay and die prematurely, thereby giving rise to a series of symptoms which may be associated either with irritation of definite nerve structures—e.g., lightning pains, visceral crises, mania and epileptiform convulsions—or with neural destruction, e.g., ataxy, paræsthesia, anæsthesia, paresis, and dementia. The irritative phenomena may be the sign of increased neural irritability due to degeneration of neurones prior to their death and loss of function. I do not, however, affirm that the lymphatic and vascular changes play an unimportant part in the process of decay and death of the neurones—especially in general paralysis. Now it may be asked, What is the evidence to show how this neural irritation and destruction are brought about?

It is a fact that the cases of syphilitic disease of the nervous system diminish in number and gravity with each succeeding year following infection, although it must be admitted there is no essential difference in the histological changes met with in early and late syphilis of the nervous system. It is, however, comparatively very rare for parasyphilitic affections to occur within four or five years of the primary infection, and the average time is at least ten years after the appearance of the primary sore. Seeing that the great bulk of persons are affected in youth or early manhood, so the curve of incidence of onset of syphilitic affections of the nervous system reaches its maximum somewhere between 25 and 30, whereas the curve of the incidence of onset of general paralysis and tabes reaches its maximum between 35 and 40. Whereas, on the one hand, syphilis of the nervous system produces more or less sudden obtrusive symptoms indicative of gross lesions due to meningeal irritation and vascular occlusion of a random kaleidoscopic character, with remissions and exacerbations causing new and variable paralytic and irritative phenomena, on the other hand, parasyphilitic

affections are usually so insidious in origin that it may be difficult to fix the date of the onset. Again, as a rule there is a continuous progress of the disease in which remissions and exacerbations are not nearly so manifest.

Whereas, on the one hand, syphilis of the nervous system, especially in the early stage, yields to all forms of treatment which would cause the destruction of the specific organism, on the other hand, parasyphilitic affections are seldom arrested, and though sometimes benefited by antisyphilitic treatment the degree of benefit is inconsiderable when compared with the effects obtained in syphilis of the nervous system. I have myself seen no disappearance of symptoms once established in tabes or general paralysis which could be associated with the treatment. Neither could we expect that mercury or arsenic in any form could restore neurones which have undergone degeneration, although when it is the syphilitic virus which is producing symptoms due to arterial and meningeal inflammation, the administration of these remedies gives relief by destroying the specific cause, thus arresting and clearing up the inflammatory process before neuronic destruction to any considerable degree has taken place. If the spirochæta be the cause of these neuronic degenerations in parasyphilis, how does it come to pass that it has never been demonstrated in general paralysis or tabes? whereas it has been demonstrated by many authorities in syphilitic meningitis and arteritis. It might be said that there is an intracellular granule form, but this has to be proved. So far the existence of an intracellular granule form rests only on the slender basis of analogy of the spirochæta to the tick fever spirillum which has been shown by Leishman to have an intracellular granule form. If we admit this premise then it must be assumed that the spirochæta pallida has passed into a resting stage and after a lapse of years, on an average ten, it has become active and caused inflammatory changes in the membranes, vessels, and connective tissues, with secondary irritation and destruction of the neural elements. The primary meningo-encephalitic theory was the old view of the parasyphilitic affections, but most authorities now consider that the diseases termed parasyphilitic are due to a primary neuronic decay with secondary changes in the membranes, vascular and neuroglial structures. This view was taken by Sir David Ferrier in his Lumleian Lectures on Tabes Dorsalis. The positive Wassermann reaction[2] given almost in all cases of general paralysis both by the blood and cerebro-spinal fluid would suggest that the disease was the result of active syphilis, but whereas a case of active syphilis giving the Wassermann reaction in the blood after treatment may no longer give it, this is not the case with general paralysis according to my experience. I shall therefore assume that until further evidence of a more definite nature is forthcoming to show that these late manifestations of a previous syphilitic infection are to be regarded as quarternary syphilis of a nature similar to glossitis, it will be better to accept the term parasyphilis or metasyphilia and to explain the symptoms by a premature and progressive decay of neural systems, localised in some cases to afferent systems, as in tabes, or generalised in others, as in general paralysis.

I have not time to discuss the possibility of there being a specific spirochæta for these parasyphilitic diseases, nor the question whether parasyphilis is a result of racial immunity by widespread syphilisation; nor another view, that of Neisser, that the late manifestations of syphilis in the form of tabes and general paralysis may be the result of a modification of the action of the specific organism by the widespread use of mercury. Nor will I discuss the question of anaphylaxis as an explanation, but come to the more practical side of the question of the differential diagnosis of parasyphilis and syphilis of the nervous system.

The Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System from other Diseases affecting the Brain, the Spinal Cord, and the Peripheral Nerves.

The neuroses and psychoses will first occupy my attention, for in my opinion they form a most important group of cases; important because of the difficulties arising in determining whether the symptoms are purely functional or whether they are the prodromal symptoms of grave organic disease. An individual may have had syphilis; or he may think he has had syphilis; in the former case he may deny the possibility. It is in all such dubious cases that the serum diagnosis is of the greatest value: if it is positive, there is a clear indication for treatment; if the result is negative it is often extremely useful, inasmuch as I have observed that the assurance given to the patient, that there is no active syphilis, goes a long way to improve his general condition, and the apprehension and mental distress being removed, the patient recovers from his neurasthenic condition.

The neurasthenia occurring in the secondary or active stage of syphilis is in no way specific in its symptoms, although it may be favoured and intensified by the action of the poison, but the effect on the mind of a sensitive person in whom the moral sense has received a profound shock by the acquirement of a loathsome and what he believes to be an incurable disease is a most important factor. He becomes morbidly apprehensive and he suffers in consequence with sleeplessness, loss of appetite, dyspepsia, and malnutrition, a combination of factors which terminate in neurasthenia. It is of importance to diagnose between the headache and other symptoms of such an induced neurasthenia and true syphilitic headache of the secondary period, or that more serious condition premonitory of the syphilitic affection of the membranes and vessels of the central nervous system. In neurasthenia there is little real pain; there are unpleasant sensations of tightness, heaviness, emptiness, muzziness of the head, but not true pain. In syphilitic disease, on the other hand, the pain is intense, lancinating, boring, tearing; pain which is so severe as to interfere with occupation. It is often worse at night, sometimes waking the patient at a particular time. Neurasthenic headache is generally diurnal and worse in the morning on arising and better at night on going to bed. Anti-syphilitic remedies give relief in syphilitic disease, but have no influence in neurasthenia unless the condition is due in the main to a grave anæmia of the secondary period. It is very rare for a syphilitic headache to last for any length of time without serious manifestations of organic disease occurring; in fact, syphilitic brain disease seldom strikes without warning; it may be ptosis, a squint, a transitory condition of aphasia, or paralysis, a girdle sensation, &c. In neurasthenia and hysteria there are many and varied subjective symptoms and very few, if any, objective signs of the disease.

It is important to distinguish the neurasthenic state, spinal and cerebral respectively, from tabes dorsalis in the early pre-ataxic stage when the knee-jerks may be present and from general paralysis in the pre-paretic stage. As regards spinal neurasthenia the knee-jerks are increased, there are no bladder troubles, there may be impotence, also attacks of giddiness, analgesia, and paræsthesia may suggest to the patient, especially if he have medical knowledge, tabes dorsalis, yet no physician would diagnose this disease in the absence of any of the characteristic pupil phenomena—viz., inequality, irregularity, and rigidity or sluggish reaction to light. Seeing the causes which lead to cerebral neurasthenia are in the subject of syphilis the very causes which predispose to paralytic dementia, it is often difficult to decide whether a neurasthenic displaying periods of depression or excitation, especially if he be the subject of chronic alcoholism, is or is not in the earliest prodromal stage of general paralysis; for the pupil phenomena may be absent in the earliest stages of the disease, or, if not altogether absent, are certainly not nearly so definite as in tabes.

These parasyphilitic affections may be definitely differentiated from neurasthenic conditions by an examination of the cerebro-spinal fluid. The existence of lymphocytes points definitely to a chronic inflammatory condition of the central nervous system, and I have found that in practically every case of general paralysis even in the earliest stages a lymphocytosis occurs. Moreover, it always occurs in tabes dorsalis, therefore this fact is of great importance in the differential diagnosis. Many conditions of organic disease, however, give a lymphocyte reaction. In about half the cases of tabes dorsalis the fluid also gives a positive Wassermann reaction. In practically every case of general paralysis we have found a positive Wassermann reaction. So that a neurasthenic with slight mental symptoms whose fluid gave this reaction may be said to be suffering with general paralysis in the early stage. Comparatively speaking, only about 25 per cent. of the cases of syphilitic disease of the central nervous system give a

[2] I have recently had a case in which the fluid and blood taken post mortem gave a negative reaction. Clinically the case was one of rapid general paralysis of the insane. Microscopic examination showed a very marked active and widespread destruction of the cortical neurons, marked proliferation and swelling of the capillary endothelial cells, and perivascular plasma cell infiltration though not very marked. Histologically it was an early case of general paralysis.

positive reaction, though most of them give a well-marked lymphocytosis. Some nervous persons may object to have lumbar puncture; in the case of a differential diagnosis of early general paralysis from neurasthenia an examination of the blood may suffice, for if the serum does not fix the complement and give the reaction neither will the cerebro-spinal fluid—that is to say, a negative serum reaction puts out of count general paralysis. If, however, a positive reaction of the blood is obtainable then it is necessary, in order to decide the diagnosis, to perform lumbar puncture and examine the cerebro-spinal fluid; for it is obvious that every individual who gives a positive serum reaction is not suffering from general paralysis, as it only means antecedent syphilis. It would be interesting to know whether those individuals who gave a Wassermann reaction after a systematic course of energetic treatment are more liable to these late manifestations of the effects of the virus than those who, when treated efficiently, failed afterwards to give it. I should not be in the least surprised if this were so.

Hysteria and Hystero-Epilepsy.

Hysterical paralysis and hystero-epilepsy, according to Fournier and Lang, sometimes occur in the secondary stage of syphilis, and the symptoms disappear under antisyphilitic treatment. The subjects of antecedent syphilis with a neuropathic predisposition are very liable to develop hysteria and hypochondriasis, and not very infrequently syphilophobia. A negative reaction of the blood will serve to allay their ungrounded fears and desire to be injected with "606." I have seen several such cases recently. If there is a positive reaction it denotes the necessity for treatment, and such a case as I shall describe illustrates the value of this serum reaction and the examination of the cerebro-spinal fluid.

Some years ago I treated a man with cerebral gummatous meningitis, and all the symptoms cleared up; a year later he came to me complaining of a slight pain in the left side. I told him that I hoped that it was nothing more than muscular pains, but he was to come and see me again if he were not better, as I could discover no anæsthesia or objective signs. A week later I was asked to see him by a practitioner who regarded his case as *functional*. He was paralysed in the lower extremities; it had come on somewhat suddenly. Knowing the history of this patient I took him into the hospital, and for the first few days he became rapidly worse and lost complete control over the bladder and rectum as well as complete loss of sensibility below the level of the seventh rib. Under antisyphilitic treatment he made a complete recovery. No doubt the case was one of gummatous syphilitic spinal meningitis. I am not so sure as I was once of the hopefulness of curability of syphilitic meningitis; I have seen necropsies in many cases that had apparently recovered under treatment, but which have relapsed, and I should advise all people who have once suffered with syphilitic disease of the central nervous system to have the Wassermann reaction of the blood made periodically with a view to renewal of treatment if the reaction is positive. Not that I would say if the patient showed any clinical signs pointing to syphilitic brain or cord disease, and yet gave a negative reaction he should not be treated, for we do not quite know all the conditions that may prevent the reaction occurring in some individuals. In illustration of this I may mention the following case.

A man of 35, who denied infection and showed no positive signs on his body, was admitted under my care to Charing Cross Hospital suffering with ophthalmoplegia interna and externa of the left eye; he was in a condition of drowsy stupor, and there was bilateral facial paresis; his blood gave a negative reaction by three independent and very competent observers. Nevertheless, I said this is clinically syphilis—energetic mercurial inunction treatment and iodide in large doses resulted in complete disappearance of all the symptoms in a month.

Arterio-sclerosis.

Seeing that syphilis is one of the most important factors in the production of sclerosis of the arteries, especially the cerebral arteries and general arterial sclerosis, causing Bright's disease, it follows that combined with nervous diseases may be uræmic symptoms, headaches, pyrexia, twitching, and epileptiform seizures. If uræmic symptoms occur in a case with antecedent syphilis, the blood may give a positive reaction. Now, the patient suffering with arterio-sclerosis is usually over 50 years of age, and if he has an inborn neuropathic tendency may suffer with an involutional melancholia; he becomes irritable, suspicious, and even dangerous to himself and others; there may be exaggerated emotivity and a partial dementia, so that not infrequently such cases are regarded as general paralysis. However, unlike general paralysis, the patient retains his notions of personality and his autocritical faculty, and he is more or less conscious of his failure of memory and mental enfeeblement. If he is the subject of various forms of coarse paralysis the diagnosis is easy. It is extremely rare to obtain ankle clonus and Babinski's sign in general paralysis. Lumbar puncture would settle the diagnosis in a doubtful case—lymphocytosis and a positive Wassermann reaction would decide in favour of general paralysis. Arterio-sclerosis may especially involve the perforating arteries and cause lesions about the basal ganglia, giving rise to mimic disturbances, increased emotivity, accompanied by dysarthria and pseudo-bulbar symptoms; such cases to my knowledge have been mistaken for general paralysis.

Chronic Alcoholism.

Chronic alcoholism and syphilis are so often associated that cases frequently present themselves of considerable difficulty of diagnosis. Absence of the serum reaction enables one in the absence of definite signs of syphilitic affection of the nervous system, and when all the symptoms accord with alcoholic poisoning, to exclude syphilis or parasyphilis—e.g., in polyneuritic psychosis; but suppose the reaction is positive and symptoms and signs exist which may possibly indicate general paralysis or syphilitic disease of the central nervous system combined with alcoholism and possibly masked by it. It is then that lumbar puncture and examination of the cerebro-spinal fluid will be of great use, as a lymphocytosis will show that there is, in addition to the alcoholism, a syphilitic affection; if in addition there is a positive reaction, it points to general paralysis. The following is a good case in illustration of this.

A man, aged about 28, was said to be suffering from general paralysis and I was asked to see him. I found that he had been drinking heavily for some time past; there were a great deal of mental confusion, loss of knowledge of time and place, personal illusions, and loss of memory of recent events. He had contracted syphilis five years previously, for which he had been treated. He had had a left-sided hemiplegic condition from which he had recovered; there were ankle clonus and Babinski's sign on this side. The pupils were equal and reacted sluggishly to light. I was told that his blood gave a negative reaction. I gave it as my opinion that it was not general paralysis and that he would recover with mercurial treatment and compulsory total abstinence from alcohol. I saw him again nine months later; he had two large gummata on his head, headache, and tenderness on percussion over the forehead; although he had been under the care of a medical man owing to his not complaining these had not been observed. A Wassermann gave a marked positive reaction. With mercury and large doses of iodide all the symptoms disappeared and he is practically well. A differential diagnosis of *mania a potu* from mania of incipient general paralysis associated with drink can be decided by lumbar puncture at once, although sometimes when objection is raised the true nature of the disease must be allowed to declare itself after the effects of the alcohol have had time to wear off before deciding.

Dementia Præcox.

The age, mode of onset, and evolution of this disease are unlike any syphilitic or parasyphilitic affection due to acquired syphilis, but occasionally there is a difficulty in the diagnosis of a juvenile paralytic or an imbecile the subject of congenital syphilis. There is usually in dementia præcox a strong hereditary history of insanity. Nearly 80 per cent. commence before 25. If there is any doubt, examination of the blood and cerebro-spinal fluid will settle the question.

Epilepsy with dementia, tubercular and other forms of meningitis, disseminated sclerosis, and cerebral tumours (non-syphilitic) are diseases which may sometimes be mistaken for syphilitic and parasyphilitic affections. Here, again, the examination of the blood and cerebro-spinal fluid will in most cases allow of a differential diagnosis.

The Differential Diagnosis of Syphilitic and Parasyphilitic Affections.

The average time between syphilitic infection and onset of symptoms is ten years in parasyphilitic affections; very seldom is it under five years, whereas the converse is the case with syphilitic affections. In the severe forms of syphilitic disease of the central nervous system the greatest number of cases occur in the first few years after infection and diminish with each succeeding year. Whereas the syphilitic history is well defined and the scars of lesions are common in syphilitic disease, they are comparatively rare in the parasyphilitic affections. The onset of symptoms and course of syphilitic disease are usually rapid and subject to regressions and remissions; the onset of symptoms and the course of para-syphilitic affections are usually insidious and slowly progressive, except in some cases of general paralysis in which there are numerous seizures, causing maybe *transitory* aphasia, paraphasia, monoplegias, and hemiplegias. The pupil and squint phenomena are common in syphilis, but Argyll Robertson pupil extremely rare. In parasyphilis pupil phenomena and strabismus are common, Argyll Robertson pupil is rarely absent especially in tabes and tabo-paralysis. Optic neuritis and post-neuritic atrophy are not uncommon in syphilis. A unilateral central scotoma, the other eye remaining healthy (an indication of a retro-bulbar neuritis affecting the papillo-macular bundle), is indicative of a gummatous meningitis. In parasyphilis primary optic atrophy occurs in about 10 per cent. of the cases. Bladder disturbances are common in syphilis and parasyphilis. Severe headache, worse at night, stiffness of the neck, coarse paralysis of cranial nerves, paralysis of limb and face with clonus and plantar extensor response are common as a result of syphilitic brain disease, but rarely if ever met with in general paralysis. Aphasias, anarthria, and dysarthria are common in brain syphilis, but not in general paralysis, in which the speech affection is characteristic. In fact, the term general paresis is much more correct for the parasyphilitic brain affection. The knee-jerks in a gummatous meningitis may be present one day, absent the next; in tabes they are in the great majority of cases absent throughout. The keee-jerks are exaggerated in the great majority of cases of general paralysis, but there is no ankle clonus or Babinski—in fact, these signs in a case of dementia to my mind indicate strongly syphilitic brain disease rather than general paralysis.

The Diagnosis of Tabo-Paralysis.

It is of very great importance to the patient and friends to be able to diagnose tabo-paralysis. Tabetic patients are apt to suffer with neurasthenia and mental depression and to resort to alcohol; moreover, to relieve the pains, the morphia habit may be acquired. Again, a potentially insane person may suffer with tabes and be the subject of delusions of persecution, putting an insane interpretation upon the lightning pains and visceral crises. Seeing that neither the Wassermann reaction of the blood and cerebro-spinal fluid, nor the lymphocyte reaction will help in such cases, for both tabes and tabo-paralysis give these reactions, it may be difficult to decide whether the patient is the subject of oncoming tabo-paralysis. Still, in my experience an abundant lymphocytosis and a marked positive Wassermann reaction of the cerebro-spinal fluid point to a widespread disease and therefore to involvement of the brain; if in addition in such a case apoplectiform, migrainous, or epileptiform seizures not causing gross paralysis have occurred, and especially if the knee-jerk is noted to be absent on one side and present on the other, tabo-paralysis is indicated. I may mention that about 10 per cent. of the cases of tabes dorsalis end in extension of the disease to the brain. The cerebral lesions in no way differ from those of general paralysis in the early stages.

The importance of a differential diagnosis of syphilis from parasyphilis of the nervous system cannot be over-estimated from the point of view of prognosis and treatment; whereas the former yields to energetic treatment sometimes in a marvellous manner, the latter does not. At one time I found no distinction was made in many asylums between gross syphilitic brain disease with dementia occurring in young people and general paralysis, and the cases being regarded as incurable treatment was either inadequate or not adopted. I show lantern slides of such cases.

I do not think in the light of pathology a place should be found in modern text-books for *syphilitic general paralysis*, and I speak in great deference to our leading authority, Dr. Savage, who, I believe, was the first authority in this country to recognise the association of syphilis with general paralysis and especially tabetic paralysis. There are cases of syphilitic brain disease in which there is general syphilitic end-arteritis without thrombosis; cases in which there may be at first no permanent coarse paralysis, only transitory seizures like those of general paralysis; the symptoms may be mainly psychical, although there may be headache, giddiness, and insomnia. The patient exhibits defective recollection of what has recently happened, mental fatigue, and incapacity for work; his actions are automatic and disturbances of consciousness are frequent; he may become semi-conscious or semi-comatose, then recover in almost a complete manner, only to relapse again. The transitory character of the phenomena before the occurrence of occlusion of the arteries by thrombosis resulting in permanent paralysis and dementing conditions is especially suggestive of this form of syphilitic disease of the brain. The recognition of this form of syphilis in its early stages is especially important. It is generally accompanied by a gummatous periarteritis and some meningitis more or less extensive, so that the cerebro-spinal fluid would give a lymphocyte reaction and possibly a Wassermann; the serum would almost certainly give the reaction, and should be tested in all doubtful cases. I have seen numerous cases of multiple gummatous tumours of the brain with generalised arteritis and meningitis, and the principal symptoms have been a drowsy stupor with progressive dementia, but without coarse paralysis for some time. I have noticed that such cases generally show well-marked syphilitic residua on the skin or mucous membranes, and I should always hesitate to diagnose general paresis in such cases.

Pseudo-tabes.

Cases occasionally occur of syphilitic cerebro-spinal meningitis which simulate the parasyphilitic affection very closely. I will narrate a typical case that came under my notice. A woman was sent into the wards under my care said to be suffering with tabes. She had lightning pains, girdle sensation, absence of the knee-jerks, paræsthesia and anæsthesia of the lower extremities, and bladder troubles. The pupils were unequal, irregular in outline, and sluggish to light and accommodation. There was a history of her having had a severe headache some time previously and squint and double vision. I found that she had had a healthy child four years prior to the onset of the cord symptoms, since then she had had several miscarriages. I found that the knee-jerk had come back, and I came to the conclusion that very probably, in view of the short time after possible infection, the severe headache, and the variable character of the knee-jerk, that this was a case of cerebro-spinal gummatous meningitis. Lumbar puncture was performed; 370 lymphocytes per c.mm. were found; the Wassermann reaction was negative, and the short interval, four years at most, between infection and onset made me sure that the case was one of gummatous meningitis or *pseudo-tabes*. One month of mercurial inunction treatment and all the symptoms had disappeared, and the fluid was free from lymphocytes. She still remains well, though it is now three years since I saw her first. This might have been thought to be a case of cured tabes.

Hitherto I have dealt mostly with the diagnosis of cerebral affections; I must now briefly refer to the diagnosis of spinal cord diseases.

The Diagnosis of Spinal Cord Diseases.

Syphilitic affections of the membranes may be more or less localised so as to cause practically only spinal symptoms, but many cases regarded as syphilitic disease of the spinal cord when the history of the illness and the symptoms are carefully inquired into will be found to have presented symptoms indicative of affection of the base of the brain—e.g., they have suffered with headache, a little stiffness of the neck, transitory double vision, ptosis, &c. Indeed, it is probable that cases of meningitis syphilitica, owing to invasion of the membranes by the spirochæta, may occur when the roseolar rash appears, and there have been a few cases which indicate such an affection of the membranes while the primary sore is yet unhealed. A patient presenting himself with symptoms pointing to affections of the spinal cord may give a history of antecedent syphilis and yet not necessarily be suffering from syphilitic disease of the spinal

cord. Still, as Dr. Buzzard long ago pointed out, it is astonishing how many cases of spinal cord affection in young men are due to comparatively recently acquired syphilis. I say comparatively recent, meaning thereby in comparison with tabes. The first thing to do, therefore, is to exclude syphilitic infection as a cause of spinal symptoms; the next thing is to show whether the symptoms have a causal relationship or are only coincidence. There is no clinical symptom or group of symptoms characteristic of syphilitic disease of the spinal cord, but there are certain symptoms which, if they occur in young adults, particularly of the male sex, should lead one to suspect their specific origin. The early symptoms are spinal irritation, severe intercostal pains worse at night, cramps and contracture of limb, with pains radiating down them, bladder disturbances, disappearance and reappearance of the knee-jerks, the Brown-Séquard phenomenon; in fact, symptoms pointing to a local or more generalised *meningitis* or *meningo-myelitis*, but usually without pyrexia unless there be some complication.

As in cerebral syphilis, so in the spinal disease the symptoms are particularly liable to remissions and regressions. One group of symptoms may improve or even disappear and another group appear, or symptoms may improve in one part of the body while progressing in another. These symptoms are due to a gummatous inflammation of the membranes associated generally with vascularitis involving veins and arteries. Consequently lumbar puncture and examination of the cerebro-spinal fluid reveal a marked lymphocytosis usually without a positive Wassermann reaction of the fluid, although the blood will almost certainly give it. Myelitis as a result of meningitis often follows the symptoms of meningitis; either may be focal or diffuse; the former is the more common; the latter is indistinguishable from an acute myelitis due to other causes—e.g., specific fevers, micro-organisms, and microbial toxins. The position and extent of the cord lesion may be inferred from the extent of the paralysis and loss of sensory function; the electrical reactions of the muscles will enable a judgment to be formed as to whether the anterior horns are affected. This leads me to say that cases have been described of polio-myelitis as a result of syphilis. I have had one such case under my care; the symptoms might resemble the acute spinal paralysis of the adult, especially if it were comparatively sudden in its onset, owing to the thrombosis of a vessel affected by endarteritis. Landry's paralysis might be mistaken for acute ascending myelitis of syphilitic origin, but in the latter sensation is affected, and if the patient survives there is a great tendency to the formation of bed-sores, and many muscles may waste, showing loss of faradic irritability. Such symptoms are not met with in Landry's paralysis. If the signs and symptoms point to a focal transverse myelitis we should seek to find whether it is primary or secondary. Myelitis in the acute form may arise from pressure due either to a growth or diseased bone. The root pains which precede usually by some days or weeks the paraplegia, and the absence of signs pointing to disease of the spinal column or malignant growth help in a differential diagnosis. Lymphocytosis of the cerebro-spinal fluid and a positive Wassermann reaction of the blood, even though the fluid is negative, would almost certainly indicate a syphilitic meningo-myelitis. As I have already pointed out, in most of these cases there is present or past evidence of some basic meningitis.

Disseminated sclerosis may result from multiple syphilitic foci due to obliterative arteritis; a positive Wassermann reaction of the blood, together with the age and history of the patient's illness, will suffice. A certain degree of lymphocytosis may occur in true disseminated sclerosis.

Hysteria and spinal neurasthenia in a syphilitic subject I have already referred to. The most important subject of differential diagnosis is between (1) tabes; (2) pseudo-tabes, a case of which I have already referred to; and (3) ataxic toxic peripheral neuritis; and the chief points in making a diagnosis I have summarised as follows:—

I.—*Tabes Dorsalis.*

1. Average time between syphilitic infection and onset of symptoms, ten years; very rarely under four years. Usually only slight sign of syphilitic residua. Onset and course usually slow, insidious, and progressive.
2. Pupil phenomena, inequality and irregularity common; Argyll-Robertson pupil rarely absent. Strabismus transitory or permanent, frequent.
3. Primary optic atrophy in about 10 per cent. of cases.
4. Bladder disturbances very frequent; visceral crises common.
5. Knee-jerks absent as a rule even in the early stages.
6. Lightning pains in limbs. No stiffness in neck and spine. Girdle sensation and anæsthesia to light touch in the thoracic region may be an early symptom.
7. Lymphocyte reaction as a rule not marked in the early stages. Positive Wassermann reaction in about half the cases in the cerebro-spinal fluid. Blood serum always.

II.—*Pseudo-tabes Syphilitica.*

1. Average time between syphilitic infection and most of symptoms 18 months to two years, rarely after five years. Generally signs on the body of old syphilitic residua. Onset and course usually rapid and subject to regressions and remissions.
2. Various oculo-motor paralyses common. Argyll Robertson pupil very rare.
3. Optic neuritis and post-neuritic atrophy not uncommon. Unilateral central scotoma due to affection of the papillo-macular bundle by the gummatous meningitis may occur. Headache, worse at night, often.
4. Bladder disturbances common.
5. Knee-jerks variable, one day absent and then returning.
6. Spinal pain, tenderness, and stiffness, the pains lancinating and radiating from the spine down the limbs. Girdle sensation and thoracic anæsthesia very frequently present.
7. Marked lymphocytosis of cerebro-spinal fluid. Wassermann reaction less frequent. Blood reaction always present.

III.—*Ataxic Toxic Peripheral Neuritis.*

1. A history of some toxic condition—e.g., diphtheria, typhoid, lead, arsenic, diabetes, and especially alcohol.
2. There are pain and tenderness of the limbs and paraplegia or ataxia; there may be paræsthesia; the muscles are usually wasted, and there may be reaction of degeneration. Usually there is foot-drop and wrist-drop. There is no oculo-motor paralysis as a rule, and the pupils are not affected. There are no changes in the fundus; in diphtheria there is frequently paralysis of accommodation. As a rule there is no bladder trouble unless there is an accompanying dementia. The knee-jerks may be present or absent, or exaggerated. If there be any doubt, the cerebro-spinal fluid should be withdrawn and examined. The reaction is negative and there is no lymphocytosis.

Finally, it is necessary for me to refer briefly to Erb's spastic spinal paralysis; according to my experience I am inclined to the belief of Oppenheim and Marie that these cases are really due to a syphilitic meningo-myelitis. The symptoms are a gradually developing spastic paresis of the leg, with increase of the deep reflexes; although the gait is extremely spastic the muscular contraction is but slight; the bladder is early and almost constantly affected; slight sensory disturbances are usually present. The course is chronic in most cases, and there is a tendency to improvement and even to complete arrest. Erb regarded the anatomical basis of this disease to be a primary degeneration.

The Histological Diagnosis.

Medico-legal cases may arise where a histological diagnosis is required. There have been in the London county asylums since the Workmen's Compensation Act a good few cases of patients dying in the asylums from general paralysis following injury. In some cases the injury has been slight and quite insufficient to cause the onset of the disease; in others it has been severe, and the question has arisen whether the patient was not already the subject of the disease when he met with the accident, or, indeed, whether it was not owing to a sudden lapse of consciousness the result of the disease which directly or indirectly occasioned the injury or accident. The naked-eye appearances of a well-marked case are characteristic, and I need not refer to them. The blood and cerebro-spinal fluid both give a positive reaction after death. For a considerable time past at Claybury the blood and cerebro-spinal fluid of every case that dies have been examined by the Wassermann method and the reaction is compared with the result obtained during life; all cases in which the brains are not undoubtedly to the naked eye general paralytic brains are microscoped, and we have come to the conclusion that practically every case of general paralysis gives a positive lymphocyte and a positive Wassermann reaction. A man was admitted to Claybury and died ten days after admission. He was said to have been run over by a motor 'bus three months previously and to have sustained a fracture of the thigh. He was in an acute maniacal condition, and he was certified as dying from acute delirious mania which accorded with his symptoms. I found that his blood and fluid both gave a positive reaction and there was an abundant lymphocytosis of the fluid. There were scarcely any naked-eye signs of general paralysis; in fact, there was nothing which could be asserted positively as evidence of the disease. A circumstance which accorded well with the history was that just prior to the accident he had been discharged from the navy and had passed as a taxi-driver. I found a definite scar of a chancre on the penis. Examination

of several regions of the brain was made, but only in one region examined were there the histological appearances characteristic of the disease—viz., increased vascularity, well-marked infiltration of the small vessels of the cortex with plasma cells and lymphocytes, also the membranes, proliferation of the glia cells, absence of the tangential fibres, distortion of Meynert's columns and atrophy of the constituent ganglion cells; lastly, the existence of the "rod cells of Alzheimer." All these conditions showed that this man was suffering with acute mania of general paralysis in its earliest stage; it is therefore highly probable that the severe injury had been the exciting factor in the production of the disease. We are able to decide two points by this examination—viz., that the man had general paralysis, a disease that is invariably fatal; that he had syphilis, which is an essential cause. That the evidence post mortem was to the effect that it was in its earliest stage and might therefore never have occurred if he had not had the severe accident. The fact of the existence of the scar of the chancre and antecedent syphilis should not weigh in the minds of the jury if they were satisfied that the man in all probability was not suffering with general paralysis prior to the accident, for only a very few syphilitic subjects die from general paralysis.

Another case has recently occurred which from a medico-legal point of view is of interest in showing how necessary it is to examine *various* parts of the brain histologically to confirm the diagnosis of general paralysis. Dr. C. H. Bond, of Long Grove Asylum, recently gave evidence in a trial in which the wife of one of his patients alleged that traumatism was the cause of her husband's mental breakdown. Dr. Bond considered that the case was clinically one of general paralysis of the tabetic variety, although he said there were certain anomalous bodily symptoms. He sent me the central nervous system of this patient when he died. I found a typical tabetic lesion of the posterior columns of the spinal cord. Examination of the prefrontal and central convolutions did not show the typical lesion of general paralysis. The tip of the first temporal convolution, especially on one side, showed all the characteristic lesions which I have just described.

In conclusion, I beg to thank you for so kindly listening to me so long, and yet I feel there are many things left unsaid which I might have said. However, many eminent authorities are about to follow who will be able to fill up the gaps and very probably also from their wide experience modify and correct some of the statements I have made. Finally, I wish to acknowledge my indebtedness to my assistants, Dr. J. P. Candler and Mr. Sydney Mann, who have carried out researches on the blood and cerebro-spinal fluid to which I have referred and upon which I have based my opinion as to the value of the reaction. These researches have been fully detailed by Dr. Candler in THE LANCET of Nov. 11th, p. 1320.

Nottingham-place, W.

A SPHYGMOGRAPHIC METHOD FOR THE ESTIMATION OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE.

BY J. DAVENPORT WINDLE, M.D. VICT.

THE instrumental methods in use for the clinical estimation of diastolic blood pressure are based on Marey's observation, that the maximal pulse wave occurs when the pressure about an organ is equal to the pressure within the artery supplying it. To determine the arterial pressure he devised a hand plethysmograph connected with a bottle for raising the pressure, and recorded the size of the pulse wave by means of a sphygmoscope tambour. He found that the maximal pressure corresponded with the disappearance of the pulse wave, and the minimal—i.e., the diastolic—with its largest oscillation.[1]

A similar means for estimating systolic and diastolic pressures is available by using the Mackenzie ink polygraph, and an ordinary Riva-Rocci blood pressure apparatus. The armlet is first fixed up in the usual way and connected to the manometer. The radial tambour is then applied and the pressure of the spring button carefully adjusted so that the maximal pulsation of the artery is obtained. While a tracing is being taken air is gently pumped into the bag, so that the pulse becomes progressively smaller until it ceases to be recorded; at this moment the systolic pressure is read off. Air is then released very slowly from the armlet, when the pulse wave gradually grows more ample until full pulsation is again reached. The escape of air is then stopped and the diastolic pressure read off.

This method is very convenient in the routine use of the polygraph, and sufficiently accurate for general purposes. It is a far more reliable index of actual pressure than that obtained by timing the obliteration, or moment of reappearance of the pulse by the finger. It will be found that the systolic reading is usually from 10 to 15 mm. higher than with the ordinary method, due to the fact that escape imperceptible to the finger may take place near the obliteration point. I have checked the diastolic readings by the auscultatory method devised by Korotkoff,[2] taking the diastolic pressure by this method at the moment when the sound ceases to be heard on releasing air from the bag. The maximal oscillation of the pulse curve with the sphygmographic method is true, as a rule, within 5 mm. of the auscultatory reading.

Southall, W.

[1] E. J. Marey: Nouvelles Recherches sur la mésure manométrique de la pression du sang chez l'homme Travaux du Laboratoire de M. Marey, Paris, 1878, iv., 126.

PRELIMINARY REPORT ON THE TREATMENT OF THE VACCINATION SITE WITH PICRIC ACID SOLUTIONS.

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AND

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(*From the Laboratory of the Philadelphia Hospital for Contagious Diseases, Bureau of Health.*)

THE influence of vaccination as a protective measure against small-pox is a fact proven beyond cavil. The opponents of vaccination who deny this proposition are clearly in error. The only genuine argument of the anti-vaccinists is that vaccination is not unattended with risk. The individual risk, of course, is minute, and doubtless much less than the peril of remaining unvaccinated. But in the aggregate a considerable number of undesirable complications occur. These are in many instances due to infection of the vaccinal lesion or site subsequent to the introduction of the virus. Any procedure, therefore, which would aid in lessening wound infections should be welcomed. The best possible protection to the vaccinal ulceration is afforded by the formation of a hard, concrete crust due to desiccation of the contents of the vaccine vesicle and pustule. Such a crust will form, unless there is undue inflammation and suppuration and unless the crust is subjected to mechanical violence calculated to loosen or to detach it.

Constricting shields which make peripheral pressure about the vaccinal site lead to the formation of a friable crust easily detached by various trauma. The adhesion of the crust to the sleeve or to a piece of protective gauze will often lead to forcible decrustation when the sleeve or gauze is removed. There does not seem to be an ideal dressing for the vaccinal lesion—i.e., one that will lessen the liability of the vesicle to rupture, and one that of itself will act as an antiseptic.

In view of the property of solutions of picric acid of entering into chemical union with the keratin of epithelial tissue and thus hardening the roof of the vesicle, and in view of our experience with this drug in certain vesicular skin affections, we determined to try it as a dressing after vaccination. Synchronously with our clinical trials on vaccinated children we endeavoured to determine the germicidal value of picric acid *in vitro* and *in vivo*, as well as its penetrative qualities.

The laboratory investigations of the germicidal properties

[2] This method is described in an address by Sir Lauder Brunton, Brit. Med. Jour., Nov. 5th, 1910, p. 1390.

of solutions of picric acid were conducted in the following manner:—

Part 1.—The germicidal value of a 4 per cent. alcoholic and a 1 per cent. aqueous solution of picric acid was tested with bacillus typhosus and staphylococcus albus, and the result expressed in comparison with solutions of pure phenol, the result being known as the "phenol coefficient."

Part 2.—The germicidal power of an alcoholic solution of picric acid was then tried by applying it directly to living skin and determining the results by cultural methods.

Part 3.—An effort was made to determine the penetrating and hardening properties of picric acid in 4 per cent. alcoholic solution when applied to living skin.

Part 1.

The methods for determining the germicidal value of a substance are not entirely satisfactory. It is practically impossible to conduct a test in an ideal manner. The Rideal-Walker[1] and THE LANCET methods[2] have been employed for some years and both marked an important advance in the efficiency of such tests. Lately Anderson and McClintic[3] have modified these tests, and after an experience with all three we have decided to express the results of our experiments according to their technique, the "Hygienic Laboratory Phenol Coefficient." Considerable practice and dexterity is necessary before satisfactory and uniform results are obtained. All of the following experiments have been repeated several times. Ehrenfried,[4] assisted by Overlander, found "a 1 per cent. aqueous solution of picric acid about 50 times more active as an antiseptic than the 1 per cent. phenol." Our experiments did not show picric acid to possess anything near so high an efficiency.

Technique.—As test organisms the bacillus typhosus and staphylococcus albus were employed; the former because the Hygienic Laboratory recommends it, and the latter because it is an almost constant inhabitant of the skin. The culture of bacillus typhosus was secured from the laboratory of the Philadelphia Bureau of Health and the culture of staphylococcus albus was isolated from the nose of a patient. Both were subcultured in bouillon at least three times before being used. Twenty-four-hour-old cultures were well shaken and filtered through sterile filter paper, and one-tenth of a cubic centimetre of each was used as a dose. The disinfectant solutions were made up according to weight to assure accuracy and amounts of 5 c.c. placed in sterile test-tubes. These tubes and the tube containing the culture were cooled to 20° C. When all is in readiness the culture is added and subcultures made in extract broth with exact titration to + 1·5 — 10 c.c. in each tube, by means of platinum wire loops with a diameter of 4 mm., at intervals of 2½, 5, 7½, 10, 12½, and 15 minutes. These subcultures or seed tubes are placed in the incubator at 37° C. for 48 hours, and then examined and results noted. (See Tables I., II., III., and IV.)

These experiments show the following results. 1. With bacillus typhosus picric acid is a little over four times as efficient as phenol. 2. With staphylococcus albus picric acid is a little over three and a half times as efficient as phenol. 3. The alcoholic solution of picric acid is more efficient than the watery solution.

Part 2.

To ascertain the germicidal power of picric acid in solution when applied directly to the skin 42 children were cultured.

TABLE I.—*4 Per Cent. Alcoholic Solution of Picric Acid. Bacillus Typhosus.*

4 per cent. picric acid in 95 per cent. alcohol. Temperature of medication, 20° C. Culture used, bacillus typhosus, 24 hour extract broth, filtered. Proportion of culture and disinfectant, 0·1 c.c. + 5 c.c. Organic matter, none. Kind, none. Amount, none. Subculture media, standard extract broth, reaction + 1·5, quantity 10 c.c.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 100	—	—	—	—	—	—	600/100 = 6	
	1 : 125	+	—	—	—	—	—		
	1 : 150	+	+	—	—	—	—		
	1 : 200	+	+	+	+	—	—		
	1 : 225	+	+	+	+	+	—		
	1 : 250	+	+	+	+	+	+		
	1 : 300	+	+	+	+	+	+		
Picric acid...	1 : 500	—	—	—	—	—	—	900/225 = 4; 10/2 = 5 coefficient.	
	1 : 550	—	—	—	—	—	—		
	1 : 600	—	—	—	—	—	—		
	1 : 650	+	—	—	—	—	—		
	1 : 700	+	+	—	—	—	—		
	1 : 800	+	+	+	—	—	—		
	1 : 900	+	+	+	+	+	—		
	1 : 950	+	+	+	+	+	+		

[1] S. Rideal and J. S. A. Walker: Journal of the Royal Sanitary Institute, London, 1903, 24, p. 424.
[2] THE LANCET, Nov. 13th (p. 1454), 20th (p. 1516), and 27th (p. 1612), 1909.
[3] J. F. Anderson and T. B. McClintic: Bacteriological Standardisation of Disinfectants, Journal of Infectious Diseases, vol. viii., No. 1, p. 1.
[4] A. Ehrenfried: Picric Acid and Its Surgical Applications, Journal of the American Medical Association, vol. lvi., No. 6, p. 412.

TABLE II.—*4 Per Cent. Alcoholic Solution of Picric Acid. Staphylococcus Albus.*

4 per cent. picric acid in 95 per cent. alcohol.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 40	—	—	—	—	—	—	300/40 = 7·5	
	1 : 50	+	—	—	—	—	—		
	1 : 100	+	+	—	—	—	—		
	1 : 125	+	+	+	—	—	—		
	1 : 150	+	+	+	+	+	—		
	1 : 200	+	+	+	+	+	+		
	1 : 225	+	+	+	+	+	+		
Picric acid...	1 : 200	—	—	—	—	—	—	400/150 = 2·67; 10·17/2 = 5·08 coefficient.	
	1 : 250	—	—	—	—	—	—		
	1 : 300	—	—	—	—	—	—		
	1 : 325	+	—	—	—	—	—		
	1 : 350	+	+	—	—	—	—		
	1 : 375	+	+	+	—	—	—		
	1 : 400	+	+	+	+	+	—		
	1 : 450	+	+	+	+	+	+		
	1 : 500	+	+	+	+	+	+		

TABLE III.—*1 Per Cent. Aqueous Solution of Picric Acid. Bacillus Typhosus.*

1 per cent. picric acid in distilled water.

—	Dilution.	Culture exposure in minutes. 2½	5	7½	10	12½	15	Phenol coefficient.	Remarks.
Phenol...	1 : 100	—	—	—	—	—	—	450/100 = 4·5	
	1 : 120	+	—	—	—	—	—		
	1 : 140	+	+	—	—	—	—		
	1 : 160	+	+	+	—	—	—		
	1 : 200	+	+	+	+	—	—		
	1 : 225	+	+	+	+	+	+		
	1 : 250	+	+	+	+	+	+		
	1 : 300	+	+	+	+	+	+		
Picric acid...	1 : 300	—	—	—	—	—	—	600/200 = 3; 7·5/2 = 3·75	
	1 : 350	—	—	—	—	—	—		
	1 : 400	—	—	—	—	—	—		
	1 : 450	—	—	—	—	—	—		
	1 : 500	+	—	—	—	—	—		
	1 : 550	+	+	+	—	—	—		
	1 : 600	+	+	+	+	+	—		
	1 : 700	+	+	+	+	+	+		

TABLE IV.—*1 Per Cent. Aqueous Solution of Picric Acid. Staphylococcus Albus.*

1 per cent. picric acid in distilled water.

—	Dilution.	Culture exposure in minutes.						Phenol coefficient.	Remarks.
		2½	5	7½	10	12½	15		
Phenol...	1 : 100	—	—	—	—	—	—	$\frac{250}{100} = 2{\cdot}5$	
	1 : 120	+	—	—	—	—	—		
	1 : 140	+	+	—	—	—	—		
	1 : 160	+	+	+	—	—	—		
	1 : 180	+	+	+	+	—	—		
	1 : 200	+	+	+	+	—	—		
	1 : 250	+	+	+	+	+	+		
Picric acid...	1 : 200	—	—	—	—	—	—	$\frac{350}{200} = 1{\cdot}75$ $\frac{\frac{1}{2}25}{2} = 2{\cdot}12$	
	1 : 225	—	—	—	—	—	—		
	1 : 250	+	—	—	—	—	—		
	1 : 275	+	+	+	—	—	—		
	1 : 300	+	+	+	+	—	—		
	1 : 350	+	+	+	+	+	—		
	1 : 400	+	+	+	+	+	+		

Such methods are far from being satisfactory, but with care some interesting data may be obtained.

Technique.—A 4 per cent. alcoholic solution of picric acid was employed, the same solution as used in the preceding experiments. The work was done during the early hours of the night when the children were in bed and asleep. In this way the danger of contamination was decreased. All cultures were taken by thoroughly rubbing an area of skin about 2½ centimetres in diameter over the upper arm with a stout platinum loop sterilised at the bedside. Inoculations were made in extract broth, + 1·5, and grown for two to four days at 37° C., when all were examined for growth. After taking a culture the picric acid solution was applied by means of sterile swabs and the part covered with sterile gauze and bound with a bandage. At intervals of 15, 30, and 60 minutes the bandage was carefully undone, a nurse lifted the gauze, and cultures were made from the same area in like manner. The skin was always scraped enough to secure a considerable portion of the superficial epithelium.

Results.—Of the primary cultures from the 42 children taken before the application of the picric acid 83 per cent. yielded growths, although it would appear that a growth should be secured under such circumstances in 100 per cent. of cases. Fifteen minutes after the application of the 4 per cent. solution of picric acid in 95 per cent. alcohol growths were secured in 22 per cent. of cases; 30 minutes after the application 33 per cent. yielded growths; 60 minutes later 51 per cent. of cases gave growths. From these results it appears that picric acid killed the organisms present in the skin in about 50 per cent. of cases in 15 minutes after application. However, if we wished to keep the skin relatively sterile it would be necessary to apply the solution at least every hour.

Part 3.

All attempts made to determine the depth of penetration of an alcoholic solution of picric acid when applied to the skin were unsuccessful. It is necessary to use fresh skin, and this we did, the solution being applied shortly before death and the specimen removed at autopsy. The same 4 per cent. alcoholic solution was used. The reason why our experiments were unsuccessful was because picric acid is soluble in all fixing, hardening, and clearing reagents. Sections of skin were frozen with ethyl chloride and carbon dioxide with unsatisfactory results; an attempt was then made to change the picric acid into a practically insoluble picrate of lead by immersing the skin in a solution of lead acetate prior to hardening and cutting, but this gave unsatisfactory results because the picric acid would dissolve into the lead solution before the picrate was formed in sufficient quantities to be of use; sections were then treated with a solution of an alkaloid (morphia and strychnia) with equally disappointing results.

Clinical Results.

The clinical trials were carried out under circumstances that were far from ideal and that were calculated to severely test the value of the method. Owing to the admission of several cases of small-pox into our hospital for contagious diseases all of the children in the neighbouring buildings were vaccinated. Among these was a number of scarlet fever cases, for the most part convalescent.

A 4 per cent. solution of picric acid in 95 per cent. alcohol was painted over and around the vaccinal site 48 hours after the insertion of the lymph. The paintings were then continued daily. Glycerinated lymph in capillary tubes manufactured by the New York Board of Health was used.

The treatment was used on 22 children varying from 1½ to 6 years of age. Of these, 20 vaccinations were successful and 2 unsuccessful. In another series of 9 cases in which the treatment was not used 7 were successful and 2 unsuccessful.

Many of the children had complications, such as nephritis, discharging ears, discharging nose, cervical adenitis, &c., prior to their vaccinations. Despite this fact, the results of the vaccinations were most satisfactory. The vaccinal course was in some cases unaccompanied by any fever or other constitutional disturbance. In several cases, on the eighth day, an evanescent rise of temperature to 101° F. occurred. The local reaction, as evidenced by œdema and the formation of an areola, varied in the different cases, but was in general less than in the untreated cases. Some of the children made no complaint of their arms at all. In most cases a firm, adherent, centrally depressed crust was formed by the fourteenth day. What impressed us most was the similarity in the course and appearance of the lesion in some cases to that of the old humanised vaccinations. One patient developed a vaccinal roseola, but there were no constitutional symptoms. In another case a little pus formed beneath the crust, but this dried up soon under antiseptic cleansing. Of the nine cases not treated with the picric acid solution one developed a severely inflamed arm with necrosis of the vaccinal site, and another had a mild pus infection of the vaccinal region.

We recognise that the number of cases in which we have employed this treatment is too small to permit of any sweeping deductions, cognisant as we are of differences in reaction from different sources of virus. We have received, however, a very strong impression that the use of picric acid solution is a valuable method of treating the vaccine site, and we trust that others will employ the method with a view to confirming or negativing our findings. We are convinced that a 4 per cent. alcoholic solution of the drug is preferable to a 1 per cent. aqueous solution. We have recently, with an idea of increasing the antiseptic properties of the solution, added 1 per cent. of iodine to it, but we have not had the opportunity of trying this out. This combination doubtless forms a trinitro-iodo-phenol which should possess strong antiseptic virtues.

We acknowledge herewith our indebtedness to Dr. A. W. Bowker, resident physician of the Philadelphia Hospital for Contagious Diseases, for valuable aid in noting and recording clinical observations.

Conclusions.

1. The use of a 4 per cent. alcoholic solution of picric acid upon the vaccinated area 48 hours after the insertion of the lymph does not interfere with the success of the vaccination.

2. We believe that this treatment lessens the degree of the local inflammatory reaction.

3. We believe that the patients are not so apt to exhibit constitutional disturbance.

4. The epithelial covering of the vaccine lesion is hardened, and there is a decreased liability of extraneous bacterial infection. This is doubtless due in part to the antiseptic properties of the solution applied.

5 We have determined by laboratory investigation that picric acid is about four times as efficient as phenol as a local antiseptic.

6. The common organisms on the skin are lessened in number by the application of solutions of picric acid.

LIVERPOOL ROYAL INFIRMARY.—The election committee at its meeting on Nov. 8th elected Dr. Frederick P. Wilson as honorary surgeon to the department for specific diseases.

A NOTE ON THE CEREBRO-SPINAL FLUID IN ACUTE POLIOMYELITIS.

BY J. GRAHAM FORBES, M.D., D.P.H. CANTAB., M.R.C.P. LOND.,

CLINICAL PATHOLOGIST AND BACTERIOLOGIST TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.

IN view of the existence of an erroneous idea that certain outbreaks of acute poliomyelitis are due to the action of the meningococcus, and on account of the difficulty which may occur in distinguishing acute cerebro-spinal meningitis from the meningeal type of poliomyelitis in certain cases, it may be of interest to state the results of the examination of 33 specimens of cerebro-spinal fluid withdrawn by lumbar puncture from 30 cases of poliomyelitis at the Hospital for Sick Children, Great Ormond-street. The interval between the onset of illness in these cases and the date of lumbar puncture varied from three days to six weeks.

In 24 specimens the fluid was quite clear and free from clot. In 8 traces of blood were present in varying amount, and clot formation occurred according to the degree of blood contamination. In one specimen, clear on withdrawal, a very fine web of clot formed on standing. The presence of albumin was recorded in 24 specimens, but its amount was not established by means of the albuminometer. The fluid, when boiled with a few drops of acetic acid, yielded the normal faint haze in 7 specimens, a definite cloud in 3, a fine precipitate in 5, and a heavy precipitate in 6. The amount of albumin, as a rule, varied with the duration of the illness, being usually, but not invariably, more marked, either as a fine or heavy precipitate, during the first two or three weeks of illness. In one case on the third or fourth day there was only a slight haze.

Every specimen tested for sugar showed the normal trace (0·05 per cent.).

Cytological examination of the centrifugalised deposit showed usually the presence of lymphocytes slightly in excess of the normal (1–5 per c.mm.), but in six specimens there was a definite increase above the normal, and in another six no cells or only the normal very few cells were present. Very few polymorphonuclears were ever found except where blood traces occurred, when there was no evidence of leucocytosis, except in two specimens.

The relation between an increase in amount of albumin and the presence of lymphocytes in excess appears to be fairly constant, and may reasonably be taken as evidence of tissue reaction in the presence of the hitherto unrecognised virus—a reaction shown in sections, by the perivascular lymphocytic infiltration in the substance of the cord, and also seen in the spinal meninges.

Bacteriological examinations were made in nearly every case, both of film preparations of the centrifugation deposit and by culture. In no instance were organisms found in the stained films of the cells. In 23 specimens cultures proved sterile; a variety of media were tried in several—e.g., serum, serum agar, blood agar, glucose agar, glycerine agar, ordinary agar, and broth, inoculations being made both from the fluid and the centrifugation deposit, but all with negative result. In seven specimens obvious contaminations were present.

Post-mortem examinations were made of two fatal cases. In one, in which the cerebro-spinal fluid six weeks previously had been normal and sterile, a streptococcus was obtained from the spinal fluid, but films and cultures from the cord itself proved negative. In the other the cerebro-spinal fluid, which had been normal and sterile during life, yielded no growth. There was, however, early mitral valvulitis and a small infarct was found in the kidney. The heart's blood proved sterile. In these two cases there was, therefore, evidence of a secondary terminal infection.

In 10 cases Widal's serum reaction was applied to B. typhosus and B. enteritidis (Gärtner), but in all it proved negative. This was done in view of an article on "The Etiology of Poliomyelitis," by A. E. Vipond, who obtained a positive reaction in 6 out of 16 cases occurring in Montreal and attributed the disease to the action of B. typhosus.[1] Blood films have also been examined for the Dixon-Fox-Rucher organisms in several cases without success.[2]

Leucocyte counts in three cases gave 10,750, 11,000, and 12,000 per c.mm. respectively. Differential counts: Polymorphs, 56 per cent.; lymphocytes, 41 per cent.; and large mononuclears, 3 per cent.

There can be little doubt of the value of lumbar puncture as an aid to diagnosis between cases of acute cerebro-spinal meningitis and acute poliomyelitis of the meningeal type. In the former the fluid shows very unmistakeable characters, marked turbidity, frequently coarse, purulent clot formation, a great excess of albumin, absence of dextrose, a copious cell deposit of polymorphonuclears, and easy recognition of the meningococcus both in the film preparations and cultures on serum—characters which I have verified in some 200 examinations.

Mill Hill, N.W.

[1] Brit. Med. Jour., March 18th, 1911.
[2] Brit. Med. Jour., Epitome, p. 44, March 18th, 1911.

RUPTURE OF THE POPLITEAL ARTERY AND VEIN; DIFFUSE HÆMATOMA.

BY DOUGLAS DREW, B.S. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO THE QUEEN'S HOSPITAL FOR CHILDREN, BETHNAL GREEN, E.; CONSULTING SURGEON TO THE HOUNSLOW HOSPITAL.

THE following is a brief account of the case, which I saw in consultation with Dr. L. de B. Christian of Hounslow on May 19th, 1911.

The patient, aged 28 years, was admitted to the Hounslow Hospital on April 25th, having been run over by a waggon, the wheel of which passed over the thigh just above the knee. There was a lacerated wound to the inner side of the patella, as well as considerable swelling around the knee, accompanied by much pain in the leg. The wound was cleansed and dressings were applied. On the sixteenth day after the injury the wound, which was granulating, was drawn together with a few sutures. At the end of three weeks the pain in the limb, which had persisted, became suddenly very severe and the swelling around the knee increased in size and œdema of the leg developed, but at no time had there been any coldness or cyanosis of the limb.

When I saw the patient for the first time on the twenty-fourth day after the injury he was very anæmic and was enduring very severe pain, which had to be relieved by morphia. The whole limb was greatly swollen, and below the knee there was marked œdema, which rendered it impossible to determine whether there was any pulsation in the tibial vessels. The region of the knee was enormously swollen, particularly posteriorly, where the swelling, which was hard, felt hot, the temperature being 101° F. No pulsation or thrill could be made out. It was quite clear that operative treatment was needed, as from the inflamed condition it was suggestive that the hæmatoma in the popliteal space had become infected, and the history was suggestive of rupture of the popliteal artery.

The operation was performed on May 21st. A tourniquet was applied to the groin and an incision about 10 inches in extent was made on the inner side of the knee and thigh. 1¾ lb. of blood clot were turned out of the popliteal space, and after the cavity had been sponged clear of it the popliteal vein was seen hanging across the space as a thick thrombosed cord. The upper end of the artery was at once discovered as it emerged from Hunter's canal, where it had evidently been crushed against the shaft of the femur; at this spot it was found that the popliteal vein was also partially torn through. Some little difficulty was experienced in finding the lower end of the artery, which had retracted about 4 inches to the lower part of the space. Both ends were ligatured with fine thread without division of the coats, the upper end being drawn down before the ligature was applied, so that it might retract into Hunter's canal. The wound was closed and free drainage was provided. At the end of a week, as had been anticipated, some suppuration in the cavity occurred, possibly from infection spreading from the adjacent wound at the inner side of the patella, but things went well until June 11th—i.e., 21 days after the operation, when the temperature rose and the patient complained of severe pain in the knee-joint, which became very hot and swollen, and was evidently infected. The joint was freely laid open by lateral incisions and drained. A few days later, as the temperature still remained high, a tube was inserted into the joint from the posterior aspect; it was then discovered that the infection of the joint had arisen through

sloughing of the posterior part of the capsule over the internal condyle of the femur. From this date the patient made steady progress towards recovery, and is now walking about with good but somewhat limited movement of the knee joint.

Apart from the comparative rarity of subcutaneous rupture of a main artery and vein, the case under consideration presents several points of interest. From the history it is clear that although a certain amount of bleeding into the tissues occurred at, or shortly after, the injury, yet the very severe hæmorrhage did not come on until three weeks later, as is evidenced by the sudden increase of the swelling and of the pain. It must, I think, be a very unusual occurrence for a clot to become displaced at so late a date while a patient is lying quietly in bed. Injury of this nature, particularly when the vessel affected is in the lower limb, is usually followed by threatened gangrene, and when it is the popliteal that is injured gangrene almost invariably follows. Schorong collected 45 cases of injuries of this nature to the main arteries. Of this number the popliteal was affected in 20, and in all of them gangrene supervened; in 11 the femoral was injured, and gangrene followed in 7; and in 2 the iliac, and both terminated in gangrene. The remaining 12 occurred in the arteries of the upper limb. It is difficult to offer any explanation why our patient was so fortunate as to escape, unless it was due to the absence of severe hæmorrhage into the tissues at the time of the accident. In this connexion it is interesting to note that there was not even coldness or cyanosis of the limb.

Doubtless the fact that the severe hæmorrhage did not occur until the end of three weeks, by which time the collateral circulation was well established, accounts for the fact that gangrene did not threaten after its occurrence. If it had been possible to diagnose the condition at the time of the accident one might have tried to restore the continuity of the artery by suture, but at the time of the operation it was clearly unnecessary, as the collateral circulation was well established. It is probable that the hæmorrhage came from the distal end of the artery, as the proximal end was found to contain a decolourised clot; the distal end was not examined as it lay in the depth of the wound, and was difficult to reach to apply the ligature.

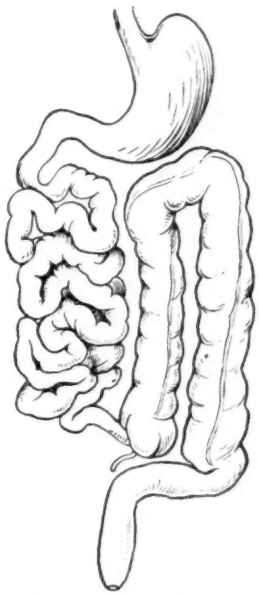
Wimpole-street, W.

TWO RARE ABNORMALITIES OBSERVED IN THE COURSE OF OPERATIONS.

BY JOHN D. MALCOLM, F.R.C.S. EDIN.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

CASE 1. *Operation for removal of the vermiform appendix; the colon all on one side.*—A woman, aged 43, who was admitted to the Samaritan Free Hospital, had suffered recently from an illness attributed to appendicitis and complained of persistent pain in the cæcal region. Chronic appendicitis was diagnosed, but when the abdomen was opened the cæcum was not in its usual place. On the supposition that it had not descended a second incision over the liver edge was made, and still neither cæcum nor colon was discovered. The gall-bladder and ducts were bound down to the stomach and liver by inflammatory adhesions, but no stone was felt and the bile could be squeezed out of the bladder, proving that the cystic duct was not occluded. Coils of small intestine, which were not adherent, filled the space where the colon should have been. The second portion of the duodenum was apparently normal. Its last part was provided with a mesentery and lay in the right hypochondriac region. A short omentum was seen attached to the stomach. By a further examination through the first-made incision the cæcum was found on the left side of the body, as low in the abdomen as usual, and so mobile that it could be brought well into view. The small intestine entered it from its right side and the appendix sprang from just below the ileo-cæcal valve. The appendix was bound to the cæcum by adhesions which did not appear to be recent. After removal of the appendix the sigmoid flexure was found to the left of the cæcum. Thus all the small intestine was to the right of all the colon. The conditions are diagrammatically represented in Fig. 1, but the height of the colon in the abdominal cavity was not determined. Sections of the appendix showed that its mucous and submucous coats were inflamed, but it is not proposed to discuss the question whether inflammation of the appendix lying on the left side of the body or inflammation of the bile-ducts could have been the cause of the symptoms attributed to appendicitis. The patient was in good health for about 18 months after the operation, and then came back complaining of vague abdominal pains, which were relieved by simple remedies. A proposal to have the abdomen photographed by X rays after a bismuth meal was declined and she did not return. It is obvious that in this patient the half-twist of the alimentary

FIG. 1.



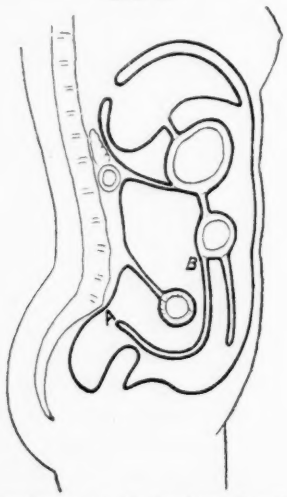
canal by which in the course of development the ascending colon passes over to the right side of the abdomen did not take place. I am not aware that this malformation has been described before.

CASE 2. *Gastro-jejunal anastomosis for secondary cancer involving the stomach; small intestine shut off from the general peritoneal cavity by a peritoneal membrane.*—In 1905 I removed the cancerous left mamma of a woman who was then 55 years of age, and she apparently made a complete recovery. About June, 1910, she began to suffer from pain in the back of the chest which extended towards the throat and was accompanied after a time by vomiting and a formation of two large swellings lying side by side in the upper two-thirds of the abdomen. These were resonant on percussion and varied in size with the food taken and the material ejected by vomiting. The patient was under the care of Mr. R. Capes of Denmark Hill, who kindly wrote to me about her, but she refused to see me again until February, 1911, when in consultation a diagnosis was made of secondary malignant growth involving and obstructing some portion or portions of the upper part of the alimentary canal. Surgical treatment was not thought desirable unless the conditions became intolerable, in which case it might be wise to attempt to short-circuit the intestine past the obstruction.

After a few days the patient was determined at all hazards to get any relief that was possible at once. Accordingly, on Feb. 15th Mr. Capes administered an anæsthetic, and I operated with the assistance of Dr. Andrew Elliot. Immediately before the patient was placed upon the table a large quantity of fluid was washed out of her stomach, so that this viscus when exposed was small and flaccid. It had a somewhat hour-glass shape, and the two swellings observed before the operation had been its distended right and left portions which had doubled down from the narrow part so as to make a valve-like division between them. Behind there was a diffuse new growth, apparently of retroperitoneal origin, which fixed the upper narrow part of the stomach to the posterior wall

of the lesser peritoneal sac, and which just showed itself on the surface of the greater cavity of the peritoneum above the lesser curvature of the stomach. The ascending, transverse, and descending colons appeared normal, but when the omentum was turned up there were no small intestines visible anywhere. In their place there was a soft elongated oval mass lying more or less parallel with the long axis of the body. When its lower end which dipped into the pelvis was brought through the incision this mass assumed a rounded shape. It consisted of a thin membrane of peritoneum covering the whole of the small intestines and bulged by them into all parts of the peritoneal sac which they usually occupy. The membrane (A, B, Fig. 2) was attached to the posterior

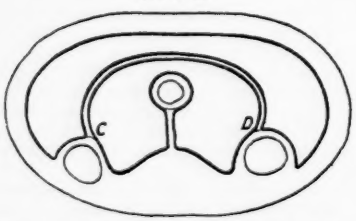
FIG. 2.



Abnormal membrane. A B, In longitudinal section; A marks the nearly central round opening in the membrane.

abdominal wall transversely above the sacral promontory, and close to this attachment there was a gap in it at A, Fig. 2, through which the small bowel passed just before it joined the colon. This opening had a diameter of about an inch and its edge was thickened. The abnormal membrane was incised and afterwards cut away and then the small intestines were exposed and appeared to be in all respects normal. The relations of the upper end of the jejunum were those usually found. The membrane which had been incised extended up to the transverse colon, to the back of which it was attached. Above the colon another or the same membrane was continued to the stomach across a space of quite 2 inches. From the stomach a membrane passed to the posterior abdominal wall in the usual position of the lower limiting boundary of the lesser sac of the peritoneum. The abnormal membrane was attached at the sides (C, D, Fig. 3) to the

FIG. 3.



Abnormal membrane. C D, In cross section.

posterior wall of the abdomen inside the attachments of the ascending and descending colons, which were rather more loosely fixed than usual. Figs. 2 and 3 show the relations of the parts diagrammatically in longitudinal and in cross sections as well as it was possible to define them in the living body.

A short circuit was made between the left portion of the stomach and the jejunum, and as the gastric wall was fixed posteriorly an anterior anastomosis was made, the small gut being brought through the thin membrane between the stomach and the colon. Shock was severe towards the end of the operation and the administration of the anæsthetic had to be discontinued, but Mr. Capes kept the patient going and she rallied. In spite of frequent vomiting for a few days progress was rapid, and after a fortnight the patient was able to be up and about. She became so well that she expressed the belief that she was cured. But on July 7th she again consulted Mr. Capes because she had become deeply jaundiced. He found a large irregular mass occupying the greater part of the abdominal cavity, the left iliac fossa being most free from growth. The tumour increased in size and the patient soon had to take to bed, becoming gradually weaker until she died, on Sept. 2nd. During the last fortnight of her life there was almost incessant diarrhœa, but apart from this there were no fresh symptoms. There was no pain and no vomiting. The results of the operation were therefore very gratifying, for the patient had quite four months of active life and she died a much easier death than that accompanied by obstructive vomiting.

Dr. J. W. Walker, of Peckham Rye, who first sent this patient to me, and under whose care she was for many years, has kindly told me that she had never suffered from any illness attributable to an inactivity of, or obstruction to, intestinal peristalsis, and, of course, the abnormality found, apart from the new growth, would not cause symptoms of any kind.

Professor Cleland in 1868[1] described a condition observed post mortem which very closely resembled that above described. When the abdomen was opened "the entire mass of the small intestine remained concealed from view, being lodged within a secondary sac bounded by omentum and mesocolon and communicating with the general sac by means of a small aperture at the upper margin of the ileo-cæcal junction only large enough to admit the passage of a finger." On making incisions from this natural inlet to the arch of the colon "the normal arrangement of peritoneum may be said to have been produced."

Another example of a somewhat similar abnormality was found in the post-mortem rooms of the University of Manchester by Dr. J. D. Hickley and Dr. J. Cameron.[2] In this case the enveloping membrane did not have any opening and it was quite separate from the colon. It contained in its upper anterior part the lower portion of the duodenum, which lay in front of the superior mesenteric artery. The relations of the abnormal membrane to the colon and duodenum in this case appear to have been quite different from those found in the other two.

Wimpole-street, W.

[1] Journal of Anatomy and Physiology, 1868, vol. ii., p. 201.
[2] Ibid., 1902, No. 41, p. 88.

ROYAL SOCIETY MEDAL.—A Royal Medal has been awarded by the president and council of the Royal Society, with the approval of the King, to Dr. William M. Bayliss, F.R.S., &c., for his researches in physiology.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14th, 1912, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the College on or before May 1st, 1912. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1911 has been awarded to Dr. Francis D. Patterson, of Philadelphia, Pa., for his Essay entitled "The Parathyroid Glandules."

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Treatment of Cholera.

A MEETING of this section was held on Nov. 10th, with Sir WILLIAM OSLER in the chair.

Major LEONARD ROGERS, I.M.S., read a paper entitled "Further Experience of the Treatment of Cholera by Injections of Hypertonic Salines and Permanganates Internally among Europeans at Palermo." He said that in Calcutta he had found cholera to be more severe and more difficult to treat successfully in Europeans than in natives of India, so he had spent most of last August studying the question in the lazaretto at Palermo, with the kind permission of the Italian sanitary authorities and of the director, Professor Romano. Major Rogers claimed that his researches on the blood changes in cholera had shown that the death-rate was in proportion to the loss of fluid from the blood, which amounted in the collapse stage to from one-half to two-thirds of the entire fluid of the serum, while the salts might be lost to a still further degree. About four pints of hypertonic solution must be injected intravenously to replace these losses. Normal saline solutions had been found to be of little use, as they rapidly escaped again through the bowel with return of the collapse. By using a hypertonic solution containing at least half as much chlorides again as a normal solution (120 gr. of sodium chloride to one pint), the fluid was retained in the body, and the diarrhœa was usually checked. By that simple means the death-rate in Calcutta was reduced from 60 to 33 per cent. Still the worst cases died from toxæmia, so Major Rogers experimented further and found that cholera toxins were readily destroyed by oxidising agents. He therefore gave large quantities of permanganates internally, with the result of still further reducing the death-rate to only 23 per cent. in native patients. Still more striking was the fact that whereas there was evidence to show that not more than 10 per cent. of seriously collapsed cases used to recover, no less than 68 per cent. of such cases had been saved by the new methods of treatment. With Europeans at Calcutta the recovery-rate for 13 years under the old treatment was only 18·4 per cent., while with the new methods it rose to between 50 and 60 per cent., a great advance, yet one still leaving room for further improvement. During the reaction stage which followed recovery from collapse, the great dangers were high temperature and deficient renal secretion leading to uræmia. The latter Major Rogers showed to be due to deficient blood pressure and continued concentration of the blood, which could nearly always be prevented, if the kidneys were previously healthy, by removing those conditions by additional isotonic saline injections and blood-pressure raising drugs. The proportion of uræmic deaths after cholera in Calcutta had been reduced to one-half by these measures. During the three weeks Major Rogers lived continuously at the cholera hospital at Palermo 84 intravenous injections were given in 67 patients, at nearly all of which he was present. During the first ten days, when the difficulties were exceptionally great and time only permitted the more severely collapsed patients to be transfused, 51·8 per cent. of 27 cases were saved from almost certain death. This series included four very old patients who were hopeless from the first, an unusually large proportion. During the last 12 days, when the medical staff had learnt his methods and were able to give him most valuable assistance, the recovery-rate among 40 very serious cases treated by intravenous injections was just 60 per cent., which was distinctly better than had previously been obtained in collapse cases among Europeans in Calcutta, and represented a six-fold reduction in the mortality among that grave class of case. Further, with more time and help and the English system of nursing several more cases might, he was sure, have been saved. The death-rate among the total admissions during his stay, he was informed by the director, was under 20 per cent., but as this included some doubtful suspected cases Major Rogers did not lay so much stress on it as on the rate in the very serious intravenous cases. Gratifying as these results were, he was convinced by his probably unique experience at Palermo that they would be improved on in the future. Hitherto, he had gone on the principle of only giving intravenous injections when the blood pressure had fallen as low as 70 mm. or less in natives of India, or 80 mm. or under in Europeans, unless the blood was found to be extremely concentrated, as shown by a very high specific gravity. Experience showed that a fair proportion of cases not requiring an intravenous injection on admission subsequently collapsed, and might be ultimately lost in spite of intravenous saline solutions being then administered. He had thus often had to regret abstaining from giving an intravenous saline solution on admission in a not very serious condition. On the other hand, he had never regretted having given an injection, so it was evident he had not yet used them as often as was advisable, and earlier and more frequent intravenous injections were clearly indicated. Fortunately there was in the specific gravity of the blood a safe guide, for if it was raised from the normal of 1056 to over 1062 he had always found it safe to give three or four pints of hypertonic saline solution intravenously in adults. In future in cholera he intended to use these injections in all patients in the acute diarrhœal stage with a specific gravity of the blood over 1062 and a blood pressure below 100 mm. in an adult in order to anticipate and prevent the onset of collapse, and he was sure that by this means many of the deaths from late complications, such as uræmia, asthenia, and lung complications, would be averted. In patients coming fairly early under treatment, and who were neither old (over 50) nor very young, and whose kidneys were healthy, he was convinced that the mortality might be reduced to an extremely low figure, probably to under 20 per cent. In very young children subcutaneous injections of hypertonic salines were frequently successful in preventing or even removing collapse, while a number of children between the ages of 6 and 11 years in a collapsed condition were saved by the same solution given intravenously. His hypertonic solution would therefore appear to be worthy of trial in infantile diarrhœa, especially if the quantities given were regulated by estimations of the specific gravity of the blood by means of glycerine and water solutions as used by him in cholera.

Dr. F. M. SANDWITH said that for Major Rogers to have brought down the mortality of cholera from its usual 60 per cent. to 23 per cent. or even 20 per cent. in India was a great achievement. Dr. Sandwith was glad to hear of a ready means of getting the specific gravity of the blood, because it must be remembered that the majority of cases of cholera had to be treated in cholera camps and villages without any of the resources of the laboratory.

Surgeon-Major WILLIAM DUNCAN, I.M.S., said that when he was in India his mortality from cholera was 60 per cent. of the cases, so it seemed to him almost incredible that it could have been brought so low as had been stated, but in many epidemics there was a low percentage of recovery following on a higher percentage. Moreover, Dr. Rogers's experience rendered his figures trustworthy.

After Mr. E. C. HORT had spoken Major ROGERS replied.

LARYNGOLOGICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Nov. 3rd, Dr. STCLAIR THOMSON, the President, being in the chair.

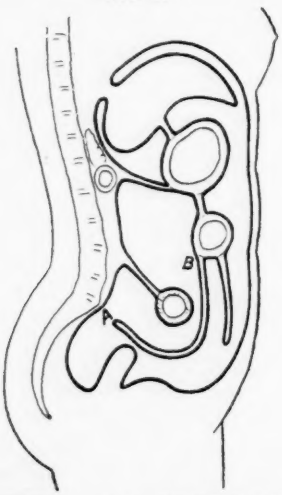
The PRESIDENT showed a case of Epithelioma of the Larynx in a man, aged 23, which had been exhibited at a previous meeting of the section and in which the appearances suggested a simple rather than a malignant growth. The subsequent course of the case, together with the microscopic examination, however, had rendered the diagnosis certain.

Mr. J. EVERIDGE exhibited a Pedunculated Intrinsic Growth of Larynx in a man, aged 41, attached to the free margin of the posterior fourth of the right vocal cord, and freely moveable during respiration.—Various opinions were expressed by the members as to the nature of the growth, and it was agreed that microscopic examination alone could be relied upon for certainty.

Mr. HERBERT TILLEY showed two cases illustrating Unusual Complications of Chronic Empyema of the Nasal Accessory Sinuses. In one, a fluctuating swelling at the inner margin of the orbit had induced displacement of the

of the lesser peritoneal sac, and which just showed itself on the surface of the greater cavity of the peritoneum above the lesser curvature of the stomach. The ascending, transverse, and descending colons appeared normal, but when the omentum was turned up there were no small intestines visible anywhere. In their place there was a soft elongated oval mass lying more or less parallel with the long axis of the body. When its lower end which dipped into the pelvis was brought through the incision this mass assumed a rounded shape. It consisted of a thin membrane of peritoneum covering the whole of the small intestines and bulged by them into all parts of the peritoneal sac which they usually occupy. The membrane (A, B, Fig. 2) was attached to the posterior

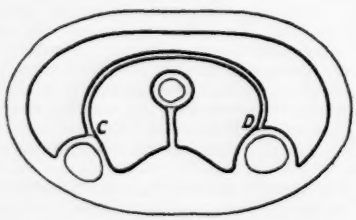
FIG. 2.



Abnormal membrane. A B, In longitudinal section; A marks the nearly central round opening in the membrane.

abdominal wall transversely above the sacral promontory, and close to this attachment there was a gap in it at A, Fig. 2, through which the small bowel passed just before it joined the colon. This opening had a diameter of about an inch and its edge was thickened. The abnormal membrane was incised and afterwards cut away and then the small intestines were exposed and appeared to be in all respects normal. The relations of the upper end of the jejunum were those usually found. The membrane which had been incised extended up to the transverse colon, to the back of which it was attached. Above the colon another or the same membrane was continued to the stomach across a space of quite 2 inches. From the stomach a membrane passed to the posterior abdominal wall in the usual position of the lower limiting boundary of the lesser sac of the peritoneum. The abnormal membrane was attached at the sides (C, D, Fig. 3) to the

FIG. 3.



Abnormal membrane. C D, In cross section.

posterior wall of the abdomen inside the attachments of the ascending and descending colons, which were rather more loosely fixed than usual. Figs. 2 and 3 show the relations of the parts diagrammatically in longitudinal and in cross sections as well as it was possible to define them in the living body.

A short circuit was made between the left portion of the stomach and the jejunum, and as the gastric wall was fixed posteriorly an anterior anastomosis was made, the small gut being brought through the thin membrane between the stomach and the colon. Shock was severe towards the end of the operation and the administration of the anæsthetic had to be discontinued, but Mr. Capes kept the patient going and she rallied. In spite of frequent vomiting for a few days progress was rapid, and after a fortnight the patient was able to be up and about. She became so well that she expressed the belief that she was cured. But on July 7th she again consulted Mr. Capes because she had become deeply jaundiced. He found a large irregular mass occupying the greater part of the abdominal cavity, the left iliac fossa being most free from growth. The tumour increased in size and the patient soon had to take to bed, becoming gradually weaker until she died, on Sept. 2nd. During the last fortnight of her life there was almost incessant diarrhœa, but apart from this there were no fresh symptoms. There was no pain and no vomiting. The results of the operation were therefore very gratifying, for the patient had quite four months of active life and she died a much easier death than that accompanied by obstructive vomiting.

Dr. J. W. Walker, of Peckham Rye, who first sent this patient to me, and under whose care she was for many years, has kindly told me that she had never suffered from any illness attributable to an inactivity of, or obstruction to, intestinal peristalsis, and, of course, the abnormality found, apart from the new growth, would not cause symptoms of any kind.

Professor Cleland in 1868[1] described a condition observed post mortem which very closely resembled that above described. When the abdomen was opened "the entire mass of the small intestine remained concealed from view, being lodged within a secondary sac bounded by omentum and mesocolon and communicating with the general sac by means of a small aperture at the upper margin of the ileo-cæcal junction only large enough to admit the passage of a finger." On making incisions from this natural inlet to the arch of the colon "the normal arrangement of peritoneum may be said to have been produced."

Another example of a somewhat similar abnormality was found in the post-mortem rooms of the University of Manchester by Dr. J. D. Hickley and Dr. J. Cameron.[2] In this case the enveloping membrane did not have any opening and it was quite separate from the colon. It contained in its upper anterior part the lower portion of the duodenum, which lay in front of the superior mesenteric artery. The relations of the abnormal membrane to the colon and duodenum in this case appear to have been quite different from those found in the other two.

Wimpole-street, W.

[1] Journal of Anatomy and Physiology, 1868, vol. ii., p. 201.
[2] Ibid., 1902, No. 41, p. 88.

ROYAL SOCIETY MEDAL.—A Royal Medal has been awarded by the president and council of the Royal Society, with the approval of the King, to Dr. William M. Bayliss, F.R.S., &c., for his researches in physiology.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14th, 1912, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published. They must be typewritten, and if written in a language other than English should be accompanied by an English translation, and must be received by the secretary of the College on or before May 1st, 1912. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1911 has been awarded to Dr. Francis D. Patterson, of Philadelphia, Pa., for his Essay entitled "The Parathyroid Glandules."

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Treatment of Cholera.

A MEETING of this section was held on Nov. 10th, with Sir WILLIAM OSLER in the chair.

Major LEONARD ROGERS, I.M.S., read a paper entitled "Further Experience of the Treatment of Cholera by Injections of Hypertonic Salines and Permanganates Internally among Europeans at Palermo." He said that in Calcutta he had found cholera to be more severe and more difficult to treat successfully in Europeans than in natives of India, so he had spent most of last August studying the question in the lazaretto at Palermo, with the kind permission of the Italian sanitary authorities and of the director, Professor Romano. Major Rogers claimed that his researches on the blood changes in cholera had shown that the death-rate was in proportion to the loss of fluid from the blood, which amounted in the collapse stage to from one-half to two-thirds of the entire fluid of the serum, while the salts might be lost to a still further degree. About four pints of hypertonic solution must be injected intravenously to replace these losses. Normal saline solutions had been found to be of little use, as they rapidly escaped again through the bowel with return of the collapse. By using a hypertonic solution containing at least half as much chlorides again as a normal solution (120 gr. of sodium chloride to one pint), the fluid was retained in the body, and the diarrhœa was usually checked. By that simple means the death-rate in Calcutta was reduced from 60 to 33 per cent. Still the worst cases died from toxæmia, so Major Rogers experimented further and found that cholera toxins were readily destroyed by oxidising agents. He therefore gave large quantities of permanganates internally, with the result of still further reducing the death-rate to only 23 per cent. in native patients. Still more striking was the fact that whereas there was evidence to show that not more than 10 per cent. of seriously collapsed cases used to recover, no less than 68 per cent. of such cases had been saved by the new methods of treatment. With Europeans at Calcutta the recovery-rate for 13 years under the old treatment was only 18·4 per cent., while with the new methods it rose to between 50 and 60 per cent., a great advance, yet one still leaving room for further improvement. During the reaction stage which followed recovery from collapse, the great dangers were high temperature and deficient renal secretion leading to uræmia. The latter Major Rogers showed to be due to deficient blood pressure and continued concentration of the blood, which could nearly always be prevented, if the kidneys were previously healthy, by removing those conditions by additional isotonic saline injections and blood-pressure raising drugs. The proportion of uræmic deaths after cholera in Calcutta had been reduced to one-half by these measures. During the three weeks Major Rogers lived continuously at the cholera hospital at Palermo 84 intravenous injections were given in 67 patients, at nearly all of which he was present. During the first ten days, when the difficulties were exceptionally great and time only permitted the more severely collapsed patients to be transfused, 51·8 per cent. of 27 cases were saved from almost certain death. This series included four very old patients who were hopeless from the first, an unusually large proportion. During the last 12 days, when the medical staff had learnt his methods and were able to give him most valuable assistance, the recovery-rate among 40 very serious cases treated by intravenous injections was just 60 per cent., which was distinctly better than had previously been obtained in collapse cases among Europeans in Calcutta, and represented a six-fold reduction in the mortality among that grave class of case. Further, with more time and help and the English system of nursing several more cases might, he was sure, have been saved. The death-rate among the total admissions during his stay, he was informed by the director, was under 20 per cent., but as this included some doubtful suspected cases Major Rogers did not lay so much stress on it as on the rate in the very serious intravenous cases. Gratifying as these results were, he was convinced by his probably unique experience at Palermo that they would be improved on in the future. Hitherto, he had gone on the principle of only giving intravenous injections when the blood pressure had fallen as low as 70 mm. or less in natives of India, or 80 mm. or under in Europeans, unless the blood was found to be extremely concentrated, as shown by a very high specific gravity. Experience showed that a fair proportion of cases not requiring an intravenous injection on admission subsequently collapsed, and might be ultimately lost in spite of intravenous saline solutions being then administered. He had thus often had to regret abstaining from giving an intravenous saline solution on admission in a not very serious condition. On the other hand, he had never regretted having given an injection, so it was evident he had not yet used them as often as was advisable, and earlier and more frequent intravenous injections were clearly indicated. Fortunately there was in the specific gravity of the blood a safe guide, for if it was raised from the normal of 1056 to over 1062 he had always found it safe to give three or four pints of hypertonic saline solution intravenously in adults. In future in cholera he intended to use these injections in all patients in the acute diarrhœal stage with a specific gravity of the blood over 1062 and a blood pressure below 100 mm. in an adult in order to anticipate and prevent the onset of collapse, and he was sure that by this means many of the deaths from late complications, such as uræmia, asthenia, and lung complications, would be averted. In patients coming fairly early under treatment, and who were neither old (over 50) nor very young, and whose kidneys were healthy, he was convinced that the mortality might be reduced to an extremely low figure, probably to under 20 per cent. In very young children subcutaneous injections of hypertonic salines were frequently successful in preventing or even removing collapse, while a number of children between the ages of 6 and 11 years in a collapsed condition were saved by the same solution given intravenously. His hypertonic solution would therefore appear to be worthy of trial in infantile diarrhœa, especially if the quantities given were regulated by estimations of the specific gravity of the blood by means of glycerine and water solutions as used by him in cholera.

Dr. F. M. SANDWITH said that for Major Rogers to have brought down the mortality of cholera from its usual 60 per cent. to 23 per cent. or even 20 per cent. in India was a great achievement. Dr. Sandwith was glad to hear of a ready means of getting the specific gravity of the blood, because it must be remembered that the majority of cases of cholera had to be treated in cholera camps and villages without any of the resources of the laboratory.

Surgeon-Major WILLIAM DUNCAN, I.M.S., said that when he was in India his mortality from cholera was 60 per cent. of the cases, so it seemed to him almost incredible that it could have been brought so low as had been stated, but in many epidemics there was a low percentage of recovery following on a higher percentage. Moreover, Dr. Rogers's experience rendered his figures trustworthy.

After Mr. E. C. HORT had spoken Major ROGERS replied.

LARYNGOLOGICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Nov. 3rd, Dr. STCLAIR THOMSON, the President, being in the chair.

The PRESIDENT showed a case of Epithelioma of the Larynx in a man, aged 23, which had been exhibited at a previous meeting of the section and in which the appearances suggested a simple rather than a malignant growth. The subsequent course of the case, together with the microscopic examination, however, had rendered the diagnosis certain.

Mr. J. EVERIDGE exhibited a Pedunculated Intrinsic Growth of Larynx in a man, aged 41, attached to the free margin of the posterior fourth of the right vocal cord, and freely moveable during respiration.—Various opinions were expressed by the members as to the nature of the growth, and it was agreed that microscopic examination alone could be relied upon for certainty.

Mr. HERBERT TILLEY showed two cases illustrating Unusual Complications of Chronic Empyema of the Nasal Accessory Sinuses. In one, a fluctuating swelling at the inner margin of the orbit had induced displacement of the

eyeball downwards and outwards; operation revealed destruction of the roof of the orbit and of the posterior wall of the frontal sinus. The second case presented proptosis of the right eye with œdema of the upper eyelid and cheek. A fistula, discharging pus, led to carious bone in the inner and posterior region of the orbit. The parts having been opened up from the orbit the ethmoidal wall was found to be diseased, and a sequestrum was removed from the region of the posterior cells. Operation on the antrum showed this cavity to be full of thick caseous pus.—Discussing the second case several members remarked that the presence of thick pus in the antrum was probably induced by the sequestrum, since it had been remarked that the condition known as rhinitis caseosa was often found in conjunction with a foreign body in the nose.

Mr. TILLEY also showed a patient with Nasal Polypi, in whom there was an erosion or deficiency of both nasal bones.

Mr. G. WILKINSON exhibited a case of Melanotic Sarcoma of the Nose. The patient was a man, aged 51, and the sarcoma consisted of a rounded projection growing from the vestibule and lateral nasal wall, and a polypus of sooty-black colour attached to the middle turbinal. The soft tissues of the side of the nose, cheek, and upper lip were infiltrated by the growth, and the septum showed melanotic infection at the spot where the growth came into contact with it. This extensive involvement had necessitated complete removal of the left upper jaw, together with the soft parts covering the left side of the nose externally, as well as the skin of the ala and a portion of the upper lip and cheek. The gap thus left was subsequently closed by a plastic operation. The operation, performed a year ago, had not so far been followed by any recurrence.—Members drew attention to the extreme rarity of melanotic sarcoma of the nose.

Mr. WILKINSON also showed a Fibro-angioma Growing from the Inferior Turbinal, of the same type as that which was commonly termed "bleeding polypus of the septum."—Several members agreed that this and other cases, however, should lead to the adoption of the expression "bleeding polypus of the nose" as a more accurate title of this variety of neoplasm.

Dr. H. LAMBERT LACK showed a case of Papilloma of the Palate in an old man, with microscopical section of the tumour, the clinical aspect of which had aroused suspicion of malignancy, a suspicion which was, however, removed by the microscopical examination.

Dr. W. H. KELSON exhibited a case of Ulceration at the Base of the Tongue. He was disposed to regard it as tuberculous, although several members raised the question of malignancy.

Dr. KELSON also showed a case in which the appearance of the tonsils and fauces bore some resemblance to the appearances seen in secondary syphilis affecting those parts.—Several members had seen similar cases, and the suggestion was made that the habit of drinking strong alcoholic liquors might be responsible for the inflammatory exudation present.

Dr. DAN MCKENZIE and Mr. HENNING JAMES showed a case undergoing Rapid Expansion of the Jaw by means of dental plates and screws, for nasal obstruction due to narrowed nasal passages, a method which has been used in America with considerable success according to the reports.

Dr. JAMES DONELAN exhibited a case of Laryngeal Tuberculosis (shown also in May, 1909, and June, 1910) in which repeated applications of the galvano-cautery had been of considerable service.

Dr. DONELAN also showed a woman suffering from Multiple Sinusitis in whom the frontal sinus had been opened three times. On the third occasion the sinus was found to have become filled with bone.

Dr. ANDREW WYLIE showed a case of Paralysis of the Right Vocal Cord, with an affection of the third, sixth, and tenth motor cranial nerves, with a negative Wassermann reaction. The causation of the nerve lesions was problematical.

Mr. GEORGE W. BADGEROW showed a girl with a Lingual Thyroid and a patient with Cyst of the Ary-epiglottic Fold. In neither case was operation advised.

Mr. BADGEROW also exhibited a Swelling in the Neck of a Child, aged 4½ years, which seemed to members to be a cystic hygroma.

Dr. W. JOBSON HORNE showed a case of Ulceration of One Ala and Vestibule of the Nose, which reminded the PRESIDENT of a class of pernicious ulcers in this situation described by McBride, and not amenable to treatment.

Dr. G. WILLIAM HILL and Mr. C. HOPE showed two cases of Cancer of the Œsophagus, in which arrest of food took place in the deep pharynx, although the site of the growth lay well below the bifurcation of the trachea.—A discussion upon the question of œsophageal spasm followed the exhibition of these cases.

Dr. HILL also showed a child in whom Laryngo-tracheostomy had been performed.

Dr. J. DUNDAS GRANT exhibited a case of Early Epithelioma of the Ventricular Band in a man aged 30, in which both the clinical appearances and the microscopic section gave rise to some differences of opinion.

Mr. W. D. HARMER showed a patient, aged 46, with Superficial Ulceration of the Fauces, Palate, Tonsils, Pharynx, Cheeks and Lips, suggestive of pemphigus or streptococcal infection. The skin was not affected, but one eye had been destroyed.

OPHTHALMOLOGICAL SOCIETY.

Dust-like Opacities.—Ocular Conditions found in Mongolian Idiots.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Nov. 9th, Mr. J. B. LAWFORD, the President, being in the chair.

The PRESIDENT announced that some time ago the Council determined to propose three names of gentlemen for honorary membership: the late Dr. Hughlings Jackson, Sir Jonathan Hutchinson, and Dr. Landolt, the Bowman lecturer of last summer. The result of the ballot was the unanimous election of Sir Jonathan Hutchinson and Dr. Landolt.

Professor STRAUB read a communication on the Pathology of Dust-like Opacities in the Vitreous Body and of Descemet's Dots, and it was supplemented by an epidiascope demonstration. He said that among the diseases of the eye there should be recognised an inflammation of the vitreous body which he proposed to name "hyalitis." He injected into the vitreous body of the rabbit some pathogenic microbes. Those microbes made the culture there and only there, and attracted to the vitreous body serum and leucocytes. The serum and leucocytes were produced by the vessels of the ciliary body, but that was not a reason to talk of cyclitis in cases of inflammation of the vitreous body. He likewise injected into the ciliary body pathogenic microbes, and to those went serum and leucocytes, and there was produced a real cyclitis, quite different from the hyalitis which he had in the first experiment. In the laboratory hyalitis could be distinguished from cyclitis, and the same distinction should be made in practical work. But that had not yet been done. The two diseases were mixed up in the text-books. The books said the ciliary body poured out its exudate into the vitreous body, but that was a mistake, as leucocytes did not allow themselves to be poured out. Metchnikoff said that leucocytes only went where they were attracted by chemotactic substances. When there were microbes in the vitreous body those substances went towards the vitreous body; when microbes were in the ciliary body the leucocytes went to the ciliary body. He had, in order to test the matter, tried to produce inflammation of the ciliary body by infecting the ciliary body with tubercle bacilli, causing in that way granuloma. He then made sections to see whether the vitreous was clear. He thought it was clear, with the exception of a few leucocytes here and there. But when making sections through the eye he found that the optic nerve was somewhat swollen, and that in its cup there were many leucocytes, and those were projected on to the immediately adjacent retina. So he concluded that tubercular granuloma in the ciliary body had the power to cause a very slight inflammation of the optic nerve on the other side of the eye. The lymph stream in the eye went from the ciliary body to the optic nerve, and took with it some toxins which were produced by the granuloma. Those experiments were made 20 years ago. He did not feel satisfied with his method of infecting the ciliary body, therefore eight years ago he recommenced, with a colleague, a new series of experiments, in which a thread charged with tubercle bacilli was passed through the ciliary body, through the sclerotic, and through the superficial layer of the ciliary body, and brought out into the sclerotic again. The thread was cut at the points of entrance and exit, so that there remained in the ciliary body a piece of thread 3 mm. long, and after 10 to 14 days a granuloma commenced. Some

weeks later the eye was extirpated and sections made, and he found the same things as in his experiments 20 years ago. He showed colour photographs exhibiting the points he had mentioned. The dots were caused by groups or heaps of leucocytes. Among 14 cases of dust-like opacities only one was syphilitic, nine were tubercular, and the remainder he did not know the nature of. It was quite clear that Descemet's dots were groups of leucocytes. The vitreous body, he felt sure, obtained no leucocytes from the cornea; in inflammation of the vitreous body the leucocytes came from the vitreous body.—The PRESIDENT thanked Professor Straub for his able exposition, based upon prolonged and numerous experiments.—Mr. E. TREACHER COLLINS asked how the leucocytes which died got to the back of the cornea in the first place.—Mr. J. HERBERT PARSONS said he understood Professor Straub's contention to be that the leucocytes were carried forward in the lymph stream, and his explanation of the formation of the dots was a very ingenious one. But the speaker criticised the use of the terms "hyalitis" and "descemetitis," as he regarded their use as backward steps in pathology. The tissue under discussion was non-vascular and apparently passive, whereas inflammation was pre-eminently an active process. He had hoped Professor Straub would have supported the view which he, Mr. Parsons, had hypothesized, that where there were dust-opacities in the vitreous associated perhaps with choroidal change there was really a low grade of cyclitis going on to account for the presence of those opacities, and that they were not due to any inflammation present in the vitreous *per se*. Supporting that view was the fact that in cases of choroidal inflammation there was no transference of leucocytes or organisms directly from the choroid into the vitreous until the membrane was burst through.—Mr. W. H. JESSOP said Professor Straub did not appear to have made quite clear what he understood to be the difference between hyalitis and cyclitis. He had been much interested in the demonstration of leucocytes in the cup of the optic nerve and the slight degree of papillitis. That was particularly interesting because one often felt there must be some papillitis because of the degree of swelling.—Professor STRAUB replied, affirming his belief in his ultimate power to convince ophthalmic surgeons of the truth of his thesis when he came to publish the full results of his work. He relied for the acceptance of his views upon a combination of the histological and clinical material which he had collected.

Mr. A. W. ORMOND read a paper on Ocular Conditions found in Mongolian Idiots. He had examined a number of these cases at Earlswood and Darenth Asylums, at the Evelina Hospital, and elsewhere, in all 43 cases. He described the facial and physical traits. They had a certain liability to particular diseases. Over 50 per cent. had a defect in their lenses, and almost all had some ocular defect. Sometimes Mongolians could be recognised as early as the second year. When seen later they were short of stature, due mainly to the shortness of the limbs. The head was round and the occipital protuberance of the skull ill-developed. The hands were small and the thumbs squat, the little finger being incurved. The foot was flat, and the subjects often sat tailor-fashion. They had a difficulty in pronouncing certain consonants. They were imitative, fond of music, and affectionate. Most of them died from tuberculosis, and they did not often attain adult life. There was almost constantly some ocular trouble present—blepharitis, ectropion, squint, nystagmus, or lens opacity. Blepharitis and conjunctivitis might be primarily due to dirty habits, and might be kept up by uncorrected errors of refraction. A more certain cause of the inflammatory condition of the lids was a dry, glazed condition of the skin of the lower lids, which by its contraction caused a slight degree of ectropion. In more than 50 per cent. of his cases some form of lens opacity was present, and with such a high proportion it might be regarded as an aid to diagnosis. The cataracts were of the incomplete form, and most of them of the "dot" variety in the position common for lamellar cataract. These dots when slight were often translucent, and so could not be seen by transmitted light. The opacities did not reach to the periphery of the lens in any direction, and consisted of numerous small discrete dots. The posterior pole of the cataract was often marked by a star-shaped opacity. Though the teeth of these people were defective they did not show the honey-combed condition so frequent in cases of lamellar cataract. Mr. Ormond could not record accurately the visual acuity, as the children were not sufficiently controllable to be trusted with glasses. The youngest of the patients showing cataract was aged 6½ years and the oldest 43, the average being 14¾ years. Mongolian imbeciles were in many cases the children of old parents or the last child in a large family. Of his 42 cases, 32 were males and 10 females. 23 had the interpalpebral fissure directed upwards and outwards, five had nystagmus, nine had squint, 18 had either blepharitis or ectropion, or both, 11 had epicanthus, and 25 had some lens opacity.

The following cases and specimens were shown:—

Mr. R. FOSTER MOORE showed a case of Bilateral Angioma of the Retina.

Dr. A. HUGH THOMPSON showed a second Orbital Endothelioma occurring 11 years after removal of the first. He said he regarded it rather as a fresh growth than as a recurrence of the former one.

Mr. J. COLE MITCHELL showed three cases of Rodent Ulcer which had been successfully treated by means of carbon dioxide snow

Mr. N. BISHOP HARMAN showed a case with Dislocation of the Lens in the Posterior Chamber due to an accident 18 months before. The vision had remained excellent.

Mr. C. WRAY showed a new model of a Placido's Disc and Retinoscopic Lenses.

HARVEIAN SOCIETY OF LONDON.

Discussion on the Diagnosis and Treatment of Tuberculosis of the Urinary Tract.

A MEETING of this society was held on Oct. 26th, Mr. J. ERNEST LANE, the President, being in the chair.

Dr. SAMUEL WEST opened the discussion on the medical aspect, as already reported in THE LANCET of Nov. 11th, p. 1318.

Mr. HURRY FENWICK, in opening from the surgical side, said that pure urinary tuberculosis was of hæmic origin, descending and progressive, and rarely spontaneously cured. It started in a single kidney, the bladder was only affected secondarily, therefore the earlier the disease was attacked the greater was the chance of cure, and the bladder should be left alone to avoid implicating the sound kidney. He emphasised the importance of expert bacteriology, tubercle bacilli being rarely missed, and expert cystoscopy by which early B. coli cystitis and tuberculous cystitis could be distinguished. The ureteric orifice was the clue. Frequently the diseased kidney could be detected thereby. Radiography was rarely of value. He thought that the practitioner could discover 80 per cent. of the cases at the onset of symptoms of cystitis by reference to a bacteriologist. The cystoscopist could detect 45 per cent. of the cases, and frequently localised the kidney. He objected to the Luys separator and perferred the ureteric catheter, though even this involved risk, and the cystoscope was generally sufficient by itself. The death-rate from nephrectomy was from 2 to 4 per cent., and the relief was very great. He had used tuberculin for 18 years with great confidence, and good results, but he did not regard it as a cure. He thought that in many cases nephrectomy should be preceded by tuberculin. He advocated clean removal of the kidney without exploring the cortex, nicking the pelvis, or allowing any leakage from the cut ureter. He had contended for 20 years that washing out the bladder was dangerous from unavoidable risk of added infection. He advocated nephrectomy: (1) when the ureter was much thickened; (2) in advanced cases of unilateral tuberculosis; and (3) together with nephrostomy or ureterostomy on the opposite side in incurable cystitis. The bladder should only be operated upon in primary single tuberculous ulcer.

Captain S. R. DOUGLAS, I.M.S., said that his province of work involved the diagnosis of urinary tuberculosis by bacteriological methods and the treatment of the disease by a specific inoculation. Diagnosis was made by finding tubercle bacilli in the urinary deposit or by the inoculation of guinea-pigs with urinary sediment and subsequent examination. He gave technical details. He objected to inoculation of old tuberculin for diagnosis as being likely to cause a spread of the disease, to inhibit the excreting mechanism of the

kidney, or block the ureter by swelling. Von Pirquet's and Calmette's reactions only indicated the presence of tubercle and not necessarily urinary tubercle, and the same was true of observations on the opsonic index unless some interference with the urinary system, such as cystoscopic examination, induced fluctuation of the index. Treatment by tuberculin was markedly successful in urinary cases. In advanced cases improvement though marked was slow and the treatment must be long continued. Infection with other organisms added to the difficulty and required special vaccines. He mentioned the principles governing the administration of tuberculin and drew attention to the negative phase following inoculation and its importance in renal conditions. He advocated very small doses. The largest dose which he could find in records of 30 cases at St. Mary's Hospital was 1/4000th of a milligramme of bacillary emulsion and the smallest 1/400,000th of a milligramme. He advocated the use of the opsonic index for the regulation of the dose, but when that was impossible the following were clinical manifestations of a negative phase: (1) increased frequency of micturition; (2) increase of pain; (3) lassitude within a few hours of inoculation; and (4) rise of temperature. No dose should be increased which produced a satisfactory positive phase. Treatment should be continued for weeks or months after symptoms had disappeared.

Mr. W. H. CLAYTON-GREENE said that he felt assured of the rarity of primary tuberculous disease of the bladder. Tuberculous disease of the kidney was a primary lesion confined to one kidney only and amenable to complete extirpation. The tuberculous bladder should be left alone. He was convinced of the value of the use of tuberculin, the clinical symptoms being a sufficient guide to the size of the dose. He advocated large doses and had seen great improvement with 1/500th of a milligramme T.R.

Mr. J. W. THOMSON WALKER said that he should confine himself to the practical questions raised by Mr. Fenwick. The early detection of the disease meant diagnosis of tuberculosis of the kidney and of which kidney, that being the starting-point of the disease. The clinical symptoms were slight and misleading, even in advanced cases, and might be absent until fatal anuria set in. The symptoms when present were those of cystitis. There might be an enlarged and tender kidney, a source of difficulty in diagnosis, since it might be hypertrophied and active, the other being destroyed by tuberculosis. He quoted a case in which cystoscopy showed an active, inflamed ureter on the tender side and a blocked ureter on the opposite. The tender side might be affected, but to a less degree than the opposite. Examination of the urine usually enabled the diagnosis to be made, but not always, since the ureter might be closed. He quoted a case. Tubercle bacilli in the urine were not a certain sign of urinary tuberculosis in the absence of other signs, since the bacilli could be demonstrated in the urine in many cases of phthisis. A surgeon required to know if the kidney were affected and the condition of the second kidney. The cystoscope and the ureteric catheter were required. With regard to the use of this catheter the crux of the matter was: Was it possible to make a diagnosis of early renal tuberculosis by examining the orifice of the ureter? In early cases he thought this was not so, and that the ureteric catheter was, therefore, necessary in these cases. With regard to removal of the kidney, he urged immediate nephrectomy in unilateral tuberculosis, since the chances of spontaneous recovery were negligible. Among those who advocated waiting were those who recommended tuberculin. He had used this for eight years and had observed great improvement in symptoms in many cases, but very rarely a cure. The danger of waiting was that unilateral tuberculosis might become bilateral. When cases were first met with 14 to 20 per cent. were bilateral, in late stages 55 per cent. were bilateral. The mortality in operations was 2·8 per cent., and in 230 cases there had been no death from tuberculosis within two years of nephrectomy. There was no means of telling when infection of the second kidney was about to take place, he therefore urged operative treatment in unilateral tuberculosis, and he advocated tuberculin in early unilateral tuberculosis when nephrectomy was refused, in bilateral tuberculosis, in vesical tuberculosis, after nephrectomy, and in the combination of renal and extra-urinary tuberculosis.

Dr. WEST, Mr. FENWICK, and Captain DOUGLAS replied.

MANCHESTER MEDICAL SOCIETY.

Auricular Fibrillation.—Headache in Children.—Salvarsan.

A MEETING of this society was held on Nov. 1st, Dr. A. M. EDGE being in the chair.

Dr. C. E. LEA communicated a paper on Auricular Fibrillation, in which he said: The degree of practical importance of the arrhythmia associated with the fibrillary tremor of the auricle is proportionate to the amount of strain thrown upon the cardiac musculature by its incidence. The arrhythmia of auricular fibrillation is characterised by the continuous irregularity of the ventricular rhythm, the absence of auricular contraction, and the dilatation which, if the arrhythmia is long continued, occurs. In animals auricular fibrillation can be produced by (1) direct faradic stimulation of the auricle, (2) toxic doses of digitalis, and (3) in some cases by stimulation of the vagus. In man fibrillation has not been observed in the absence of some pre-existing cardiac lesion. Most lesions may lead to fibrillation, not only those associated with gross muscular change, but also in cases where the rhythm is markedly disturbed. Cases of the latter are exemplified by the fibrillation which, in some cases, follows directly upon paroxysmal tachycardia. A case is reported by the writer in which it succeeded heart-block. The exciting causes of fibrillation are variable. It is sudden in its onset and offset. The ventricular frequency induced by fibrillation is variable. It may be associated with very rapid frequency; moderate, as in many cases of cardio-sclerosis; or with bradycardia. The pathology of the latter class is obscure. The degree of cardiac dilatation is greatest where there is a rapid frequency. No method of treatment has, so far, been found to check the fibrillation. Digitalis acts beneficially because it probably induces lessened *a.-v.* conductivity, and so diminishes the number of supra-ventricular or auricular impulses. Auricular fibrillation may be associated with complete heart-block. The diagnosis of auricular fibrillation was discussed, and its significance emphasised.

Dr. HUGH T. ASHBY read a paper on Headache in Children. He said: There is probably no symptom of ill-health more commonly met with than headache, and it is on account of its being so common and at the same time so obscure in its origin in some cases that the subject is of real importance. A complaint of headache in a child should always receive attention, especially if it is at all repeatedly complained of. Headache is not easily recognisable until about the age of 4 to 5 years, but it is quite certain that infants and young children do suffer from headache by the way they will bang and beat their heads—e.g., in ear disease. The locality of a headache is not of much importance except in a few instances like the ocular headaches, which are nearly always frontal. Headache is an almost constant, and certainly the most frequent, symptom of cerebral tumour and meningitis, and in 16 cases of cerebral tumour in children 15 had severe headache. The one case without headache was a tumour of the pons, where there was also no optic neuritis. The neurotic headache is a very distinct type; it occurs frequently in girls over 10 years of age, and it is very difficult to treat. Decayed teeth predispose to ill-health, and in this way make a headache more liable to be noticed, but they do not in themselves often cause a headache in children. Anæmia is nearly always accompanied by headache and is due to a lowering of the blood pressure, together with the poor quality of the blood.

Dr. G. H. LANCASHIRE read a paper on Salvarsan, giving the result of intra-muscular injections in a series of 28 selected cases, including primary, secondary, and tertiary stages of syphilis. The results had been good except in the last case tried, a severe tertiary case which showed no improvement. He had observed no untoward symptoms, either general or local. He regarded salvarsan as a valuable aid, used in conjunction with mercury, in certain cases of syphilis.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Nov. 10th, Dr. A. Bostock Hill, the President, being in the chair.—In introducing a discussion on the National Insurance Bill Dr. H. Meredith Richards confined his remarks entirely to the public health aspects of the measure. The purpose of the

Bill was to provide material aid in time of sickness and to prevent and cure disease. The latter object, he considered, was in the main the more important. In practice it was probable that the immediate effect of the insurance scheme on preventive medicine would be proportional to the initial bias of the Insurance Committees and to the extent to which their work was harmoniously coördinated with existing public health organisations. In most districts it would be an advantage if the chairman of the public health committee and hospital committee of the county or borough councils and the chairman of the education committee were nominated to represent the county or borough councils. Referring to the provision in the Bill which requires reports and returns as to sickness, &c., to be made by the Insurance Committee to the Insurance Commissioners, he expressed the opinion that this most important duty would require much expert knowledge and administrative skill if the central and local authorities were to have the information in a form which they could assimilate and use for practical ends. He suggested that the sickness returns should be furnished to the medical officer of health at weekly or monthly intervals, and that it should be made obligatory on him to report upon the returns to the Commissioners, the Local Government Board, and to the local sanitary authority concerned. The proposed extension of the sanatorium benefits to the dependents of insured persons would give an immense impetus to the provision of sanatoriums and to other specialised methods both for detecting and for treating phthisis. The relation of the pre-tuberculous school child to the phthisical adult; the importance of securing early treatment for adenoids and enlarged tonsils which were often the portal selected by the tubercle bacillus; the relation of dental defects to malnutrition and of malnutrition to phthisis—these would become very practical problems when the comprehensive treatment of phthisis was actually undertaken.—Dr. E. W. Hope was convinced that the Bill would give facilities for the advancement of preventive medicine in the future. He agreed that it would be a distinct advantage to have on the Local Insurance Committees the chairmen of the health and education committees. He considered that a large amount of the information which the Insurance Committees were empowered to obtain was already in the hands of medical officers of health.—Mr. F. E. Fremantle spoke in approving terms of the alteration of the name of the Local Health Committee to that of Insurance Committee. He doubted very much whether it would be practicable to put in force the penalising clauses with respect to excessive sickness.—Dr. E. H. Snell pointed out that there was no provision in the Bill for putting official information at the disposal of the Insurance Committee. He feared there would be too many overlapping authorities.—Dr. R. Dudfield spoke in general approval of the Bill, but regretted there was no reference in it to the metropolis as such. He thought that the penalising clause (46) should have been postponed for five years.—Dr. W. Butler deplored the fact that under the Bill there would be a supersession of existing public health authorities. He considered it would be utterly impossible to bring home to sanitary authorities the fact of maladministration.—Surgeon-General G. J. H. Evatt considered that medical men would have to be much better trained than at present if they had to give reports on sickness. Those in general practice would be compelled to go through a post-graduate training.—Mr. Herbert Jones anticipated that Clause 46 would have a good effect in stimulating rural authorities into more activity.—The President agreed that rural districts were most largely affected by the clause, and he pointed out that before any penalty could be enforced an inquiry would have to be made by a competent person, who, in his opinion, ought to be a medical man.—Mr. J. G. Gibbon, Dr. A. Ashkenny, Dr. J. Howard-Jones, Mr. C. Randle Harper, Dr. W. A. Bond, and Mr. Montague Harris also took part in the discussion.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 3rd, Dr. John Brownlee, Vice-President, being in the chair.—Dr. David Newman reported a small series of cured cases of Primary Vesical Tuberculosis, and discussed the questions of early diagnosis, prevention, and treatment of primary and secondary tuberculosis of the bladder, illustrating the cystoscopic appearances by the opaque projector. He said that for practical purposes the disease might be divided into five stages: (1) The stage when tubercle bacilli were present in the urine prior to obvious infection of the bladder; (2) stage of isolated submucous nodules; (3) stage of tuberculous infiltration prior to ulceration and erosion; (4) stage of superficial ulceration; and (5) stage of widespread infiltration of the surrounding structures and deep ulceration of the bladder. Two cases of early vesical tuberculosis, one operated on lately, another treated five years ago by curetting the bladder, were described. The latter has been in perfect health and the urine free from tubercle bacilli since the operation. Other two cases, one man operated on in February, 1911, the other operated on in February, 1904, were cited as complete cures, all the symptoms having disappeared and tubercle bacilli being absent from the urine. The treatment employed was suprapubic drainage and curetting the tuberculous area, together with the employment of tuberculin R. and general constitutional treatment. The relationship of tuberculous cystitis to renal, prostatic, and testicular tuberculosis was discussed, and statistics of 25 cases treated during the last seven years were given.—Dr. John Guy gave an account of his experience in the treatment of pulmonary tuberculosis by means of tuberculin in the sanatorium at Bridge-of-Weir. He had treated recently a series of 75 cases, and stated the results of treatment in 41 of these who had been under treatment for periods varying from four to 11 months, showing the effects of the remedy on the sputum, the tubercle bacilli and the lung condition. The tuberculin was given by subcutaneous injection in doses beginning with 0·001 milligramme and gradually increasing to the equivalent of 10 milligrammes of tubercle bacilli. In many cases doses much smaller than 10 milligrammes produced a febrile reaction and could not be exceeded. The estimation of the opsonic index was found to be of no practical use in tuberculin treatment. The conclusion reached was that tuberculin could be administered with comparative safety if the dosage were carefully regulated and the temperature watched; that from a clinical standpoint one variety of tuberculin appeared as good as another, but that the bacillary emulsion sometimes caused unexpected reactions. A comparison between the results obtained by the tuberculin treatment of these 41 patient and those obtained in the treatment without tuberculin of an equal number of patients in similar stages of the disease seemed to show a balance in favour of tuberculin, though the number of cases was too small to warrant a definite conclusion.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held on Nov. 8th, Mr. C. A. Morton, the President, being in the chair.—Dr. J. R. Charles showed a boy aged 6, the subject of Myatonia (Amyotonia) Congenita, and read a paper on the disease.—Dr. J. M. Fortescue-Brickdale discussed the two types of this disease, in one of which changes in the anterior horn cells were found constituting a spinal paralysis, while in the other only muscular lesions existed—a true myopathy.—Dr. F. Carey Coombs referred to a case he had described five years ago, the first reported in the United Kingdom. In that case the trunk muscles had suffered more than the limbs, whereas in Dr. Charles's case the peripheral muscles were chiefly affected. In the case under Dr. Coombs the face muscles were affected in the late stages of the disease. He was not sure whether amyotonia congenita was a true myopathy. Myopathies were always progressive, whereas arrest of the wasting and even improvement might occur in this disease.—Dr. A. L. Flemming showed: 1. A case (an adult woman) in which Filaria Loa had been Removed from the Subconjunctival Tissue of the Orbit. The disease had previously been diagnosed from the presence of an abscess in the back which proved to be a "Calabar swelling," a marked eosinophilia, and the discovery of diurnal filaria in the blood. 2. A case of a Rapidly Growing Endothelioma of the Cheek, which recurred after erosion in both the scars and pre-auricular gland, treated by radium with apparently complete disappearance of the growth. 3. A young woman in whom an Adrenal Adenoma of the Liver had been removed by laparotomy. Her symptoms had been sudden amenorrhœa, headache, lassitude, increasing bronzing, growth of hair on the face and loss of scalp hair, and marked unsociability. Deep jaundice suddenly developed with colic; at the operation two nodules were found on the liver, one of which was compressing the common duct. Microscopically they had the structure of adrenal adenoma. A similar case had been reported in the *British Medical*

Journal, Sept. 2nd, 1911, Epitome, p. 35.—Dr. Watson Williams read a paper on Cardio-vascular Nasal Reflexes and their Clinical Import.—Dr. Newman Neild read a paper on Tea-poisoning, in which he described a series of clinical signs and symptoms which in his opinion were characteristic of, and peculiar to, chronic excessive tea-drinking. He claimed for tea-poisoning a distinct and definite entity.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 2nd, Mr. T. H. Ionides, the President, being in the chair.—Dr. F. Hinds showed a mass of Lymphadenomatous Glands removed from the right side of the neck of a female aged 23. The glands were extremely adherent to the surrounding parts, and the sterno-mastoid was thinned out over its surface and partly removed with it. On section the mass was very firm and fibrous, and in the centre were patches of broken-down caseating material. The enlargement of the glands had existed for more than four years, and was on both sides of the neck and in the axillæ. The spleen within the last six weeks had become palpable, though only to a small extent. The patient had no anæmia or other symptoms of ill-health. The growth was removed on account of the deformity which it produced, being as large as a cocoa-nut, and also because the skin over it was getting red and œdematous. A blood examination showed some excess of white corpuscles and eosinophiles. There was no pyrexia. Recovery from the operation was uneventful. Microscopic specimens showed the structure of lymphadenoma. The indurated and caseating condition is very unusual and gave to the specimen the appearance of tubercle.—Dr. R. J. Ryle showed a boy and his two sisters all suffering from Bilateral Congenital Cataract. He was treating them by needling and hoped to give them useful vision.—Mr. H. H. Taylor showed, for Dr. J. R. Steinhaeuser, a case of Sarcoma of the Choroid in a man about 50 years of age. The ophthalmoscope revealed a detachment of the retina at the lower and outer part of the field, which Mr. Taylor thought was caused by a growth behind it.—The President delivered the annual address and selected as his subject Uterine Fibroids. He described their frequency, classification, symptoms, diagnosis, prognosis, and treatment. He considered that hysterectomy was in the majority of instances the proper operation, the mortality of which should not be above 3 per cent. in all cases. As regards after-treatment, he advocated Fowler's position, early movement of the bowels, hot saline injections, and avoidance of starvation. The period of convalescence was much longer than was usually given.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Nov. 8th.—Dr. Ralph Vincent (London) read a short paper on the Development of Acidity in Milk and its Relation to Time and Temperature. This was based upon a series of recent observations and experiments in the research laboratory of the Vincent-square Infants' Hospital, London, and demonstrated the constancy of the influence of both the length of time and the variation of the temperature to which milk is exposed in increasing its acidity. As commercial milk even of good quality was contrasted with the milk brought from the hospital farm to the advantage of the latter, this paper carried its own practical lesson as to the precautions necessary for a pure milk-supply in the prevention of bacterial contamination, the chilling and keeping of the milk cool, and the rapidity of transit to the consumer.—Dr. Vincent then delivered an address on the Substitute Feeding of Infants, and gave a detailed account of the principles and practice of milk modification for this purpose. He began by contrasting the state of matters 100 years ago and now as to maternal nursing, and blamed the modern education and increasing stress and rush and mental strain imposed on women for the gradual failure of lactation. A study of the work of Dr. Rotch in America has helped him in the development of the methods of milk modification which have now been elaborated in the present Infants' Hospital and the associated hospital farm and well-equipped laboratory. Lantern slides illustrating all these places were shown, and their methods of cooling and keeping cool the milk, and of separating its elements for fresh combinations according to the special prescription of the physician. Dr. Vincent concluded by describing cases, throwing on the screen a copy of the diet chart showing the variations in the modification of the milk prescribed and of the weight chart. Among the cases described were congenital syphilis, congenital defect, pyloric stenosis, atrophy, fat intoxication, and rickets. In concluding he recommended the study of biological chemistry as likely to yield the best results in the future.

BATH CLINICAL SOCIETY.—A meeting of this society was held on Nov. 3rd, Mr. F. Lace being in the chair.—Dr. Rupert Waterhouse showed a woman, aged 37 years, suffering from Splenic Anæmia. She was mother of five children; each of her pregnancies had been complicated by "dropsy." After the last confinement, three years ago, her abdomen again swelled, and when seven gallons of fluid had been removed by tapping the enlarged spleen was detected. The edge of the liver was just palpable and the blood showed—erythrocytes, 3,000,000 per c.mm.; hæmoglobin, 30 per cent.; leucocytes, 1500 per c.mm. A few normoblasts were present, but the differential count of leucocytes was normal.—Dr. James Lindsay showed a man, aged 55 years, suffering from Multiple Neuro-fibromata; the original appearance of the disease was 30 years ago.—Dr. V. Wiley showed a large specimen of an Innominate Aneurysm removed from a woman, aged 59 years; the ascending aorta showed another dilatation and the thoracic aorta a fusiform aneurysm.—Mr. A. L. Fuller read notes of two cases of Carcinoma of the Small Intestine. One case was that of a woman, aged 55 years, who had suffered from mucous colitis for three years, and who developed symptoms of obstruction. An annular carcinomatous stricture of the upper part of the ileum together with 3 feet of the small intestine and mesentery were removed, and end-to-end anastomosis was performed. Rapid improvement in health and weight took place with no further return of the colitis. Death occurred 4½ years later from recurrence. The second case was that of a woman, aged 38 years, who had a Carcinomatous Stricture of the Middle of the Transverse Colon. Owing to the mesentery being full of growth, removal was impossible, so lateral anastomosis was performed. A year later, when operating to relieve further obstruction, multiple carcinomatous strictures of the small intestine were found; lateral anastomosis to relieve urgent symptoms was again performed. The patient died six months later.

Reviews and Notices of Books.

A Practical Handbook on Diseases of the Ear, for Senior Students and Practitioners. By WILLIAM MILLIGAN, M.D. Aberd., Aurist and Laryngologist to the Royal Infirmary, Manchester; Surgeon to the Manchester Ear Hospital; Lecturer upon Diseases of the Ear to the Victoria University of Manchester; President of the Otological Section of the Royal Society of Medicine; and WYATT WINGRAVE, M.D. Durh., Pathologist (late Physician) to the Central Throat and Ear Hospital, London, and to the Polyclinic, London. With 293 illustrations and 6 coloured Plates. London: Macmillan and Co., Limited. 1911. Pp. 596. Price 15*s.* net.

THE first two chapters, which are brief, deal with the development of the ear and the anatomy of the external ear; the third gives a short *résumé* of the physiology of the ear. The fourth chapter deals briefly with the causation of aural disease, whilst that following, of rather over 40 pages, gives detailed instruction as to the examination of the ear, nose, naso-pharynx, and pharynx, with numerous illustrations of the appropriate instruments, and including the methods of the tests for hearing. The tuning forks recommended are those of Hartmann. The description of the various tests is clear and concise, not going too deeply into the theory of sound, which is beyond the average medical student or medical man. A useful piece of information, which is not given in many works at present, is the formula recommended for use in testing deaf people at the last Otological Congress in 1909. The authors give very careful directions as to the use of the Weber-Liel intra-tympanic tube as a

means of passing fluid into the middle-ear, and of Hay's pharyngoscope, of which the use is advocated.

Deformities of the external ear, followed by injuries of the auricle and external auditory meatus, form the subject of the next two chapters. Chapter VIII., on diseases of the auricle, is well illustrated by figures of sections of various new growths, and also contains lucid descriptions of diseases affecting the auricle, with their appropriate treatment. Foreign bodies in the ear and diseases of the external auditory meatus occupy the next two chapters. One of the plates shows three forms of parasite occasionally found growing in the ear. This illustration is extremely well executed.

The anatomy of the middle-ear is fully described and illustrated in Chapter XI. Catarrhal otitis media in its acute and chronic forms, with their complications and sequelæ, is ably dealt with in the fourteenth and fifteenth chapters. Acute and chronic suppurative otitis media and the appropriate treatment occupy the succeeding two chapters. In Chapter XIX. one finds a mine of information in reference to the Bacteriological Examination of Discharges. This is a branch of the subject with which both the writers' names are intimately associated, and not only does the account contain all the information that has gradually been made known, but, coming as it does from the source of the information itself, it is particularly valuable and interesting. Aural polypi, cholesteatoma, and tuberculous diseases of the middle ear form the subjects of the next two chapters. Of these, the last has been associated with the name of Dr. Milligan as one of its earliest and most earnest investigators, for many years.

In Chapter XX. disease of the mastoid process with all its accompanying sequelæ, and the proper methods of dealing therewith, are carefully and clearly enumerated. Tinnitus, its differential diagnosis and treatment, forms the subject matter of Chapter XXVIII. The next three chapters are devoted to intracranial lesions secondary to aural diseases, both the text and the illustrations being extremely clear, and the descriptions, especially of the operations, leaving nothing to be desired.

The thirty-second chapter deals with the anatomy of the internal ear. Disease of the labyrinth is dealt with in Chapter XXXIII., and all that is known at present on this matter is given. Oto-sclerosis is ably dealt with in a subsequent chapter, which is followed by one on inflammatory diseases of the labyrinth. Amongst the later interesting chapters one finds references to diseases of the ear in relation to general medicine, deaf-mutism, and aural disease and life insurance, while diseases of the nose, naso-pharynx, and pharynx, especially liable to involve the organ of hearing, fittingly occupy the concluding chapters.

This book is one the perusal of which has proved a source of great pleasure. Although it is no small work, yet there is nothing we would wish omitted, and we have not discovered the omission of anything which should have been included. The diction is easy and the descriptions are plain; the illustrations are excellent and the printing is good. Dr. Milligan and Dr. Wingrave have given us the most comprehensive work on diseases of the ear which has been published in the British Isles, and it is one which, although professedly for senior students and practitioners, will doubtless be found equally welcome by those who deal more especially with aural surgery. It is extremeley gratifying that the authors have been able to quote so freely from the work of their British colleagues, while they themselves give a practical demonstration of the progress of British otology.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLIII., Nos. 1 and 2. Cambridge University Press: C. F. Clay. Sept. 11th and Oct. 20th, 1911. Price 6*s.* 6*d.* and 7*s.*—The first paper, by Harriette Chick and C. J. Martin, on Heat Coagulation of Proteins, is a continuation of a previous paper (*Journal of Physiology*, vol. xl., 1910). "Heat coagulation" of egg-albumin consists of two processes: (1) the reaction between the protein and hot water ("denaturation"), and (2) the separation of the altered protein in a particulate form (agglutination). The rate of (2) was arranged to be greatly in excess of that of (1) in the experiments, so that (1) is the limiting factor in the process. During the process, as protein is precipitated, free acid is progressively removed from the solution. The extra amount of acid fixed by egg-albumin in coagulation was determined and its cause explained. The coagulate rate is lowered by the presence of salts, e.g., NaCl and Am_2SO_4. The short paper by F. O'B. Ellison, The Relation between the Physical, Chemical, and Electrical Properties of the Nerves, Part V., The Action of Cinchonamine Hydrochloride on Frog's Nerve, is the fifth of the series, and is chiefly interesting to physiologists, as it deals with the specifically different action of cinchonamine hydrochloride on the injury current and on the negative variation of frog's nerve. Arthur Harden and Hugh Maclean's paper on the Oxidation of Isolated Animal Tissues is a continuation of a previous paper on that abstruse question. Minced organs and tissues of animals have no more power of producing carbonic dioxide from sugar when incubated in an atmosphere of oxygen than they have in an atmosphere of nitrogen or hydrogen. Tissue juices obtained either by the kieselguhr, the aqueous, or the saline method possess little or no respiratory action. Antiseptics and grinding the tissues with sand materially lower the oxidation processes.

The long communication, over 40 pages, of Keith Lucas on the Transference of the Propagated Disturbance from Nerve to Muscle, with special reference to the apparent inhibition described by Wedensky, is an elaborate investigation of the Wedensky effect (1885)—i.e., the "apparent inhibition" observed in a muscle excited from its motor nerve. The author's endeavour is to show that this effect depends for its possibility on a simple property known to be possessed in high degree by the synapse of the central nervous system—namely, a resistance to conduction greater than that of the continuous axon. The paper is especially interesting to physiologists. In a short paper on the Effect of Stimulation of the Eighth and Ninth Spinal Nerve-roots upon the Bladder of the Toad, Frank P. Knowlton finds that the arrangement of the autonomic system in the toad is similar to that of the frog; that stimulation of the eighth nerve-root produces no effect on the bladder. No evidence of efferent fibres in the posterior roots was found. H. M. Vernon gives an account of his further investigations on the Indophenol Oxidase of Mammalian and Avian Tissues. He finds it to be most abundant in the heart muscle, whilst the liver, with one exception, is poorest. The amount of oxidase in various tissues of the rabbit, cat, and dog roughly corresponds with their degree of oxygen saturation, as determined by Ehrlich by his *intra vitam* staining methods. In birds there is a close parallel between the oxidasic power of the tissues and the respiratory exchange. The canary has eight times the CO_2 output of the goose. The oxidasic power of a tissue depends largely on its power of sustained activity—e.g., the pectoral muscle in vigorous flying birds is as rich in oxidase as the heart, and three times as rich as limb muscle, while in the tame duck pectoral muscle contains scarcely any

oxidase. In mammals red muscles contain much more oxidase than white, and tongue and diaphragm most of all next to the heart. Cold-blooded animals have very little, while in small embryos it is at a minimum, and rapidly increases with embryonic development, and for the first fortnight of post-natal existence. The liver for a week or two after birth is richer in oxidase than the adult liver.

In Vol. XLIII., No. 2, the paper of Mutch and Pembrey on the Influences of Tetrahydro-B-Naphthaline upon the Temperature and Respiratory Change deals chiefly with the relation of the rise of temperature to muscular activity. The drug, the action of which was first investigated by Stern, causes extreme dilatation of the pupil, constriction of the vessels of the ear, rapid respiration, restlessness, greatly increased muscular activity, spasms, and even convulsions. In fatal cases death may be due to either hyperthermia, paralysis, or cyanosis with cardiac failure. The increased heat appears to bear a definite relation to the muscular activity, and is accompanied by an adequate increase in the intake of oxygen and the output of carbon dioxide. The action of the drug is upon the central nervous system, upon the higher more than the lower, the increased excitability being accompanied by increased muscular movement, spasms, and even convulsions. The rise of temperature, at any rate in the non-fatal cases, can be explained by the increased muscular activity. Convulsions were present in each case when death occurred from hyperthermia, a condition favoured by the cyanosis present. The processes of oxidation and heat production are increased when the temperature of an animal is raised above its optimum, so that it is unnecessary to expect a persistence of vigorous muscular movements during the whole time the temperature is rising. There is a marked antagonism between the drug and anæsthetics; in suitable doses it prevents chloral narcosis, and chloral or chloroform will arrest the rise of temperature produced by the drug.

Professor Langley's paper on the Effect of Various Poisons upon the Response to Nervous Stimuli, chiefly in Relation to the Bladder, is the largest contribution. The experiments were made on anæsthetised cats. Starting from his own observations on the antagonistic action of curari and nicotine upon peripheral nerve cells, the author discusses the nature of that action. The nerves to the bladder were exposed—the bladder itself being previously filled with a mixture of normal urine and warm salt solution, so that the bladder could contract under nearly isotonic conditions. The sacral nerves were stimulated in pairs; the alkaloids were injected into a vein and faradic stimuli were increased. Numerous tracings are given to show the effects or responses obtained. Stimulation of the sacral autonomic fibres affects nerve fibres, nerve cells, and the smooth muscle of the bladder. The author concludes that it is the nerve cells which are affected by the drug. Stimulation of the sacral nerves, which contain vesico-motor fibres, caused strong contraction of the bladder, as shown by the curves taken of variations of the internal volume of the bladder. If the stimulus is brief relaxation soon sets in; if the stimulus is prolonged relaxation sets in more slowly. No clear evidence was obtained of the presence of inhibitory fibres in the normal condition. After injection of nicotine the first effect of stimulating the sacral nerve is inhibition. Nicotine stimulates the peripheral nerve cells. There is antagonism between nicotine and curari and both act on the peripheral nerve cells. When curari or nicotine has been injected stimulation of any branch of the pelvic plexus, which has pre-ganglionic fibres, causes after-contraction, but stimulation of post-ganglionic fibres on the bladder causes a normal contraction with no after-contraction. We must refer to the original paper for the remarks of the author, more especially when he himself says: "I do not think any final conclusions can be drawn as to the cause of the various phenomena described in the paper." The paper of H. H. Dale and P. P. Laidlaw (Wellcome Research Laboratory) on the Action of Iminazolylethylamine is a continuation of a previous paper (*Journal of Physiology*, vol. xli., 1910). The drug causes a vaso-dilator fall of blood pressure in carnivora and in the monkey and fowl, and this is due to a direct action of the base and not to the liberation of a vaso-dilator substance in the body. It is independent of the integrity of the peripheral sympathetic neurons, but is not due to direct action on the smooth muscle. It also causes a large and rapid fall of rectal temperature. The note by the same authors on reversed action of the chorda tympani on salivary secretion is interesting. Under certain conditions—after nicotine, curari, hordenine, tropine—a reversed action of the vagus is possible—i.e., the cat's heart may be accelerated during, and inhibited between the periods of, stimulation. On using cytisine, the alkaloid of laburnum seeds, the authors obtained a secreto-inhibitory action, instead of the usual excito-secretory effect.

In the short paper communicated by the late Dr. F. W. Pavy and W. Godden on Some Recently Elicited Facts Relating to Carbohydrate Metabolism and Glycosuria, experiments are given to support Pavy's contention that sugar is taken from view by the incorporating agency of bioplasm, what is not so dealt with being discharged from the system with the urine. The paper by T. Graham Brown and C. S. Sherrington—Observations on the Localisation in the Motor Cortex of the Baboon (Papio anubis)—is illustrated with elaborate charts of the cerebral motor areas. The localisation in the motor cortex of the baboon agrees closely with that found in other simian types examined. As regards specialisation, it lies between macacus and the anthropoid types. On the pre-central gyrus from below up the successive areas are for lower face, upper face, neck, arm, chest, abdomen, leg, and perineum. Face movements are particularly clearly demonstrated. Overlapping of individual representatives in each of these main areas is very marked. The following are some of the titles in the Proceedings of the Physiological Society for July 22nd, 1911:—P. G. Ward: The Study of the Action of Various Salts on Isolated Muscle; I., Sodium, Potassium, and Ammonium Salts. B. R. Macmillan: A New Form of Perfusion Stopcock. Casimir Funk: Note on the Probable Formation of Adrenaline in the Animal Body. L. Bull: On the Simultaneous Record of the Phono- and Electro-cardiogram. F. W. Edridge-Green: Lantern for the Quantitative Estimation of Defects of Colour Perception.

The Archives of the Roentgen Ray under the energetic editorship of Mr. W. Deane Butcher is a most valuable periodical. The outstanding feature of the October number is that of the X ray treatment of malignant disease. The point of view taken by Professor S. Leduc, of Nantes, is one that has much to recommend it, and should be widely read. Dr. Reginald Morton treats the same subject in a very temperate spirit; he makes a plea for the more general use of post-operative attention, and points out the feasibility of treating the operation area before the wound is closed. The plates in this number are taken from some made in the General Hospital of Birmingham by Mr. J. Hall-Edwards and Mr. F. Emrys-Jones. Those showing disease and injury about the skull are very fine.—The November number, just issued, is also of unusual interest, and contains articles contributed from France, Germany, and Austria. Professor Leduc's article on Molecular Physics contains some interesting studies on the phenomena of solution, in continuance of his fascinating investigations on osmotic growth,

which excited so much interest at the Royal and other learned societies last winter. Professor Albers Schonberg contributes an article on the new Lindeman focus tube, of lithium glass, which promises to be a great advance in X ray tube construction. The most interesting paper, however, is that by Dr. Guido Holzknecht on the Roentgen Diagnosis of the Stomach. This is admirably illustrated and contains very definite and practical suggestions for the diagnosis of gastric diseases, as well as a description of Haudek's simplified method for the Roentgen examination of the stomach by means of a double bismuth meal. The "Notes and Abstracts" found in each issue are judiciously selected to form a guide to the current literature dealing with the subjects of the journal itself. The change in size and arrangement of the "Archives," on which we commented about a year ago, has rendered this journal much more handy and convenient.

The Medical Chronicle.—In the October issue is published a thesis by Dr. P. Moran on the Pharmacological Action of Tincture of Digitalis, with special reference to the mode of its preparation and to the effects of age. He concludes that the drug deteriorates with keeping; possibly the digitoxin is decomposed. But a reliable preparation made with 90 per cent. alcohol should remain useful for two or three years. A second thesis, by Dr. Herbert Tomlin, deals with miners' nystagmus, which the author attributes to the rhythmical swaying action of using a pickaxe, aided by the bad illumination and by the optical effects of the crystalline fracture of the coal.

Edinburgh Medical Journal.—A paper by Dr. A. Logan Turner on the Spread of Bacterial Infections from the Nasal and Naso-pharyngeal Cavities by Way of the Lymphatic Channels appears in the November number of this magazine. The author considers that the assumption of a flow of lymph from the nose to the brain is improbable, the current, if any, being presumably in the opposite direction. On the other hand, tubercular infection may be conveyed from the nose to the cervical lymphatic system. Dr. G. Duncan Whyte discusses the causes of the prevalence of pulmonary tuberculosis in South-east China, and Dr. James Oliver writes on Utero-sclerosis and Sclerosis of the Recto-utero-vesical Fascia.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

(1) ALCOHOLIC EXTRACT OF GUINEA-PIG'S HEART; (2) HÆMOLYTIC SERUM FOR SHEEP'S CORPUSCLES; AND (3) EPININE FOR OPHTHALMIC USE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

1. THE alcoholic extract of guinea-pig's heart is for use as an antigen in the Wassermann reaction, replacing the extract of syphilitic fœtal liver originally used by Wassermann. It is an obviously convenient preparation for the modern diagnosis of syphilis, and is obtained by digesting the finely minced hearts in alcohol and, finally, filtering the fluid. 2. The hæmolytic serum for sheep's corpuscles is prepared by inoculating an animal with sheep's red corpuscles. Ultimately the serum of the inoculated animal acquires the property of hæmolysing sheep's corpuscles. As a dilution it can thus be used as a hæmolytic serum in the Wassermann and other complement deviation tests. 3. Epinine, the synthetic substance having a pharmaceutical action similar to that of the suprarenal active principle, is now prepared in tabloid form for ophthalmic use. Each tabloid contains 0·006 gramme of epinine. In this form this valuable hæmostatic can be easily applied to the eye.

VITTEL WATER (GRANDE SOURCE).

(E. DEL MAR, 12, MARK-LANE, LONDON, E.C.)

Vittel water has enjoyed a reputation in the treatment of gout and kidney troubles. It affords the centre of attraction to the health resort Vittel, an interesting old town situated to the south-east of Paris and about 70 kilometres from the German frontier. Recently Vittel has developed considerably and a new colony has sprung up about half a mile from the old town, where hotels and the usual appurtenances of a health resort have been erected in view of increasing demands. The environment of New Vittel is attractive and there are facilities for open-air recreations. The waters appear to be most beneficial in the treatment of gout and allied disorders, but, like so many other waters, a mere chemical analysis does not seem to supply an explanation of the practical good obtained by their use. According to our analysis, Vittel water from the Grande Source contains about 1·836 grammes per litre of mineral salts, and the principal constituents are the sulphates of lime, magnesia, and soda in approximately equal quantities. Generally speaking, a water that contains sulphates shows radio-activity, and this may have something to do with the valuable medicinal properties of Vittel water. Then, of course, a strict *régime* of a course of water is an advantage in many of the cases which treatment at Vittel benefits. The water is, further, alkaline by reason of the carbonates of the alkaline earths present. Apart from the value of the waters in the treatment of disease, there are provided at Vittel all the essentials of hydro-therapeutic practice.

PEPTO-MANGAN (GUDE).

(AGENCY, THOS. CHRISTY AND CO., 4–12, OLD SWAN-LANE, LONDON, E.C.)

The important ingredients of this preparation are, according to our analysis, iron and manganese, both of which are in organic combination. The addition of ammonia produces no precipitate, but the addition of caustic soda does. The presence of peptones was confirmed, and the inference is that iron and manganese occur as peptonates, an admittedly useful form of administering these metals where a hæmatinic is indicated (chlorosis, anæmia). There is present also ammonia, for on heating with soda a strong smell of ammonia was evolved. The same result is obtained when the ammonium citrate of these metals is similarly treated. The preparation is a clear brown fluid and palatable. According to some clinical reports which have been submitted to us its administration distinctly effects an increase in the number of red corpuscles and in the amount of hæmoglobin. Our analysis gave the following figures:—Alcohol by volume, 18·25 per cent.; total solid matters, 4·39 per cent.; mineral matter, 0·83 per cent., containing 0·44 of ferric oxide (Fe_2O_3) and 0·13 per cent. of manganic oxide (Mn_2O_3).

ORIENTAL TOOTH PASTE.

(JEWSBURY AND BROWN, ARDWICK GREEN, MANCHESTER.)

This tooth paste satisfies the requirements of an application intended to keep the teeth scientifically clean. It contains a polishing agent, an antacid substance, and agreeable antiseptics chiefly in the form of aromatics. It is quite pleasant to use, is free from grittiness, and leaves a pleasant impression in the mouth. Further, it has mild astringent properties.

MARVIS FLAKES.

(MARVIS AND CO., 4, STARR-YARD, CAREY-STREET, LONDON, W.C.)

We have examined this food preparation previously, but recently a further improvement has been made, inasmuch as the flakes are now prepared from fresh instead of salted fish. The flakes are clean and white and contain all that is

nourishing in the fish itself. They are free from disagreeable odour or taste. According to our examination starch is an important adjunct in the drying process. We found just over 50 per cent. of proteins present. The flakes are a cheap source of protein food and, when cooked properly, can be made the foundation of an appetising dish.

FORMITROL.

(A. WANDER, LIMITED, 1 AND 3, LEONARD-STREET, LONDON, E.C.)

These formalin pastilles show evidence of improvement on their former production. The active constituent is formaldehyde, with which are associated menthol, citric acid, and milk sugar for convenience of administration. The tablet is firm and is grooved with lines which enable it to be broken into definite fractions, which is convenient in cases when smaller doses are required. The pastilles are designed for the bactericidal treatment of the throat. Each individual tablet is wrapped in tin-foil, which tends to preserve the standard strength of the pastille as regards formaldehyde.

APONAL.

(WIDENMANN, BROICHER AND CO., 33, LIME-STREET, LONDON, E.C.)

Several synthetic hypnotics have fallen out of favour of recent years owing to the fatalities which have resulted from their use. There has been uncertainty in regard to their action, and on the whole it would appear that some of them possess an action in some cases which is too intense for the purpose. Aponal is regarded as a mild hypnotic which is useful in the treatment of insomnia and which, so far as the clinical evidences of its use have gone, is without undesirable effects. Chemically it is amylene hydrate carbamate prepared by the action of chloride of urea on amylene hydrate. Its hypnotic action is ascribed to the presence of amylene hydrate (tertiary amyl alcohol), but on account of its penetrating odour and objectionable taste the administration of this without further combination was inexpedient. By converting the hydrate into a salt of carbaminic acid, amylene hydrate is now presented in a solid form with pleasant properties and the resulting compound is known as aponal. A series of physiological experiments is quoted which show that this compound in suitable doses produces healthy sleep, and the patients upon whom it has been tried are stated to experience a feeling of relief and freshness which follow natural sleep. All new hypnotics, however, should be tried with caution.

New Inventions.

A "CORNEAL CURETTE."

THE general practitioner frequently has to treat cases of a foreign body in the eye. When it is situated in the usual position, on the palpebral conjunctiva of the upper lid, he usually has no difficulty in dealing with the case. Not infrequently, however, the particles of cinder or steel alight upon the cornea and may have become embedded in it by the time the practitioner sees the case. Unaccustomed to the operative treatment of eye cases, he has some diffidence in attacking the cornea with a sharp instrument. In such cases a little corneal curette which has been devised by Dr. John M. Wheeler of New York will be of service. It resembles an ordinary discission needle, the point of which has been bent on the flat into a semicircle. It is impossible with ordinary care to penetrate deeply into the cornea with this instrument, whereas it is easy by a rotatory movement around the long axis to gouge out a foreign body.

A SALINE DROP REGULATOR.

WITH all the existing forms of continuous infusion and proctoclysis apparatus there is a certain amount of difficulty in regulating the flow of the saline fluid. To overcome this, Messrs. Allen and Hanburys, Limited, of Wigmore-street, London, W., have made to my instructions a simple drop regulator, as shown in the accompanying illustration. The barrel is made from toughened annealed glass, and the nickel-plated metal mounts at either end for attaching the indiarubber tubing are securely cemented on with metallic solder, thus allowing the regulator to be efficiently sterilised either by boiling or steam. The stopcock of the regulator can be adjusted by the surgeon before leaving the patient, so that any required number of drops may be administered during a given period. The glass barrel then readily allows the dropping rate of the solution to be kept under observation, and the nurse in charge of the case can easily check the rate of flow by counting the number of drops passing through the extremity of the inner indicating tube, altering the rate of flow, if necessary, by the use of the stopcock. This simple device obviates the need for spring clips, and in practice will be found extremely efficient for proctoclysis when used in conjunction with a simple apparatus consisting of a Thermos flask, fitted with a length of rubber tubing and a rectal pipe or catheter. It will be noticed from the illustration that the inner metal indicating tube is fitted with a bulbous extremity, thus enabling the drop regulator to be employed in an emergency as an intravenous cannula.

Harley-street, W. E. CANNY RYALL, F.R.C.S. Irel.

THE EJECTOR VACCINATOR.

THIS is an ingenious arrangement, finally perfected after many years' trial, for supplying all the material for efficient vaccination in a portable form ready for use. It consists essentially of the ordinary capillary tube which contains, besides the lymph, a new steel scarifier. The tube is hermetically sealed at both ends. After properly cleansing the arm with clean water but without antiseptics the tube is broken. In order to break the tube neatly and without waste, the upper side of the tube (see illustration) is nicked in two places; the one at the drop end close above the charge of vaccine, the other at the other end of the tube at about half an inch from the charge of vaccine. The broken parts are removed, then by gently pressing on the protruding end of the scarifier with the first finger the beads of vaccine are ejected on the arm as required. The sharp end of the scarifier can then be further protruded so as to scratch through the vaccine without causing bleeding. One tube will sometimes suffice for two vaccinations if the scarifier be withdrawn and heated for a few moments in a flame. The quality of the vaccine is stated to be tested weekly by actual use as in the case of the "C.P.P." In the course of the 12¼ years ending March 31st, 1911, during which the primitive forerunners of this simplified apparatus were in use, out of 28,851 insertions there have been 91·5 per cent. of typical vesicles and 8·5 per cent. of second class. The tubes can be obtained from Mr. Edward Darke, 167, King's-road, Kingston Hill, Surrey.

Professor Anderson Stuart, Dean of the Faculty of Medicine in the University of Sydney, Professor Warren, Dean of the Faculty of Engineering, and Mr. H. E. Barff, the Registrar, will with Earl Beauchamp, formerly visitor of the University, represent Sydney University at the Imperial Congress of Universities which will be held in London in July, 1912. This congress will be an important event in the educational history of the empire.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 18, 1911.

The National Insurance Bill.

OUR correspondence columns again contain communications which prove in unmistakeable manner the resentment aroused in the medical profession by the progress of the National Insurance Bill in committee of the House of Commons. There can be no doubt that the view of the majority of the medical profession is that the position of the profession under the Bill has not been sufficiently studied. Added to the deep feeling against contract practice that has at last found expression there is real anger at the alterations which have been made in the constitution of the Insurance Committees, tending to reduce medical representation upon these bodies to a negligible point. In these circumstances to force legislation upon the lines now indicated may bring about a struggle between the medical profession and the public, unedifying in character and all the sadder because it might have been avoided. We commend to the attention of our readers the letter of Sir ALFRED PEARCE GOULD, which appears on p. 1427 and which is strongly in confirmation of our own view that lack of time in which to consider the first principles of medical service is likely to lead to disaster. The great evil of hasty legislation is the risk of bringing about results other than those primarily intended, and indeed sometimes utterly opposed to them. When the National Insurance Bill was introduced amidst the plaudits of all parties, numberless difficulties connected with it had received but little consideration even by those responsible for it; only the broad suggestion had been laid down that pecuniary relief and medical attendance should be provided for the working classes in sickness, and that the money required for this should be provided in certain proportions by the worker himself, the employer, and the State. With all this we were in accord, but it soon appeared that those responsible for the measure had not grasped the medical side of their proposed administration in any certain manner, and were unwilling to take the needful time to arrive at the truth.

The important question of the administration of medical benefits is not the only one where haste has led to misunderstanding. Consider now the hospital question in connexion with the Bill. The claim of the Chancellor of the Exchequer has been that the Bill will provide efficient medical treatment for the working classes. An essential part of the medical treatment of the working classes is the treatment given at hospitals, almost entirely voluntary hospitals. For patients who are not confined to bed it may be possible under the Bill to provide efficient treatment—here the reasonable views of the medical profession as to the terms of medical service will have to be met. But what about the treatment in hospital of those who must be received in hospital wards? How is this treatment to be justly arranged for? For the minor affections which compel a man to keep to his bed he may be treated at home, but in the more serious conditions, and especially in those which need operative treatment, it is well-nigh impossible, as everyone knows who has any acquaintance with the subject, to treat cases among the poor satisfactorily except in the hospital. Now, it is true that nearly all of those who are to come under the scheme of National Insurance are being treated in the hospitals at the present time, and treated without any cost to the State, but under the Bill the conditions of admission will be altered. A voluntary charity will become a sort of adjunct to Government machinery, and it is quite impossible to say how far independent action will be possible. There can be no doubt that great changes will occur, and many of those who are connected with hospitals are gravely concerned at the probable and possible results to the institutions under their charge. The British Hospitals Association has through its council on two occasions expressed the opinion that the National Insurance Bill will be incomplete unless it provides for the hospital treatment which insured persons must have if their medical needs are to be covered by the Bill, and the matter has also engaged the attention of the Central Hospital Council, which represents all the chief hospitals of London. There are two aspects of the matter which have to be taken into account while we are discussing the admission of in-patients to voluntary hospitals. In the first place, we must consider the effect on the revenues of the hospitals of the fact that the employers of labour are compelled to contribute no small amount yearly to the insurance fund; secondly, we must consider the conditions under which those who are insured under the scheme can be admitted to the voluntary hospitals. There can be no doubt that there will be, at any rate at first, a grave falling off in the subscriptions from employers to the hospitals. On this point all hospital managers are practically in agreement; moreover, it does not depend on the mere opinion of the hospital authorities, for many large employers of labour have declared their intention of reducing their donations and subscriptions to hospitals when the Insurance Bill becomes law, saying that the enforced contribution to the fund will be so severe a tax on their profits that, however willing, they are unable to pay twice over for the medical treatment of their workmen. This loss in the income of the voluntary hospitals seems sure to occur—all those who are best qualified to judge are in agreement on the matter—and it will follow that the hospitals will have to close some of their wards. It was estimated in a valuable leading article in the *Hospital* last week that in London alone, for the sole use and treatment of those insured under the scheme, some 5000 beds in hospitals will be required. The figure is accounted for by reasonable calculation, and means, if it is right, that nearly half the beds in the voluntary hospitals of London would be taken up by cases occurring among the insured under the working of the Bill. It is true that some—perhaps the majority—of these cases would have reached the wards of a voluntary hospital in any case, but if the income of the hospitals is reduced, and at the same time the number of patients under the Bill is kept steadily up or is steadily increased, it must follow

either that a new source of income must be obtained for hospitals or that they must fail to discharge their liabilities.

As a matter of fact, it is not at all clear that the voluntary hospitals ought to undertake to provide treatment for insured persons, who are supposed to be insured against sickness. It is doubtful to our mind whether such a departure in administration is not an abuse of charity. If so, the solution appears to be that the State must pay the voluntary hospitals for the work they do. Yet to this there are several serious objections. In the first place, the mere amount of money required would seriously deplete the funds set apart for medical service, and in the second place the receipt of State contributions would almost certainly lead to the appointment of departmental representatives on the governing bodies of the hospitals. Some may regard such a change as necessary, but its tendency would almost certainly lead to an undesirable uniformity in the methods of the hospitals which would not work for progress. In Paris, for instance, the central administration of the hospitals has cast certain difficulties in the way of progress, for any deviations from the prescribed methods are not looked upon with approval. Even the surveillance of King Edward's Hospital Fund, excellent though it is in many ways, is tending to lead to a stereotyping of methods which may be undesirable. Further, it will have to be considered whether the medical staffs of hospitals will be willing to treat gratuitously patients for whom the hospitals are receiving payment: either a share of the money received from the State subsidy will have to go to the medical men attached to the hospitals or an additional paid staff will in each hospital have charge of the patients who are admitted under the Insurance Fund. Whichever of these schemes may be adopted, if any State funds are received by the hospitals, the very nature of the hospitals will be changed; they will be no longer voluntary charitable institutions. And if the voluntary character of these institutions be taken away it will not be long before the voluntary subscriptions and the voluntary management will disappear also. And with them much of the real life of hospitals will go. Has sufficient time been given to the consideration either of the advisability of this grave revolution or of methods to promote it or prevent it? We say, No.

A School of Preventive Medicine for Social Workers.

THAT the medicine of the future will be mainly preventive there can be no manner of doubt. Not that the reparative side of medicine can be entirely done away with, for accidents will happen, and some people at least will continue to transgress the laws of health, even though perfectly well acquainted with them and aware of the inevitable consequences of their infraction. But now that the State has come to a realisation of its vested interest in the general health, prevention must continue to come more and more to the fore; and, as in the case of other economic requirements whose infringement reacts injuriously on the body politic, so in preventive medicine conformity to the better way will necessarily be supported by legislation. Before legislation in these days, however, can become generally effective the sustaining force of public opinion must be behind it, and to arouse this the education of the public to intelligent ideals becomes of the first necessity.

Dr. NORMAN DITMAN, in an admirable paper on Education and Preventive Medicine,[1] emphasises the importance of such education, and pleads for the formation of a school of preventive medicine, so planned as to give instruction to medical men and students, health officers of all grades, sanitary engineers, school teachers and inspectors, nurses, theological students, legislators, charity society officers, social workers, and the general public. He puts forward a scheme of the various subjects of study, indicating in parallel columns to which of the several groups they are respectively applicable. The public is to be educated at the hands of all the other groups, in conjunction with the press and public exhibitions. To the educational aims of the school should be added those of research, both that of the laboratory and that into social and scientific methods. Students should be brought face to face with the conditions requiring improvements and be shown in action existing departments pertaining to health problems—e.g., tenement houses, offensive and dangerous occupations, child labour and factories, sweatshops, slaughter-houses, dairies, markets, watersheds, accident-preventing appliances, municipal methods relating to water-supply, sewage and refuse disposal, street cleaning, and the health department. The earlier part of Dr. DITMAN'S paper deals with the statistical and economic aspects of disease and injury, and describes in an admirable manner the brilliant successes that have already attended preventive medicine in regard to infectious diseases. Other diseases, of more or less unknown causation, such as cancer, diabetes, heart disease, and Bright's disease, challenge our best efforts at prevention, and illustrate the important connexion between a school of preventive medicine on one hand and hospital laboratories on the other. Finally, he deals with the class of disease and disability resulting from social evils, the control of which lies in the hands not only of the physician, but also in those of the economist, the clergyman, and the legislator—e.g., physical defects in children, preventable accidents, occupational diseases, insanity, alcoholism, and other relations of disease to poverty and crime. "Disease, crime, pauperism, insanity, and preventable accidents," says the author, "are the greatest blots on the modern civilised State, and the responsibility for the amelioration of these causes must be faced, upon the last analysis, by the medical profession. But the education of the physician in the past, while fitting him for the overcoming of isolated problems, has absolutely lacked that comprehensiveness needed to enable him to obtain a mastery of the broader economic and social problems of our modern life. For example, such a man should not only be able to cure, but should understand the problem of the prevention of disease and the investigation of its causes; he should be familiar with the methods of public health administration involving the health of the city, the State, and the country, which bear upon the purity of

[1] Education and Preventive Medicine. By Norman Edward Ditman, Ph.D., M.D. New York: The Columbia University Press. 1911. Pp. 73. Price 1s. 6d. net.

food and water supplies, the existence of dangerous occupations, and the occurrence of epidemics. He should be a master of sociological questions involving the habits of the people and the evils of tenement house existence. He should be familiar with methods of municipal finance and government, questions of commerce, economics, and medical jurisprudence. He should be conversant with the mental, moral, and physical aspects of educational questions." But it is certain that if so much is asked of the exponents of medicine intelligent help must be demanded of the public.

It would be hard to find a more comprehensive statement of the legitimate—and inevitable—field of modern medicine. An ingenious illustration of public education in such matters is recorded in the *Boston Medical and Surgical Journal* of Oct. 26th. At the City Budget Exhibit in Boston recently a play, written by a twelve-year-old girl who is one of the "little mothers" that the Health Department has recently been organising into leagues and instructing in the care of babies, was performed by her child companions. It represented a tenement house in which an infant was suddenly taken ill. Well-meaning but ignorant neighbours rush in with unsought and absurd advice, and all is confusion. Presently one of the "little mothers" comes in and takes charge. At her direction one neighbour ministers to the baby, another telephones for a medical man, a third is sent to the nearest milk station, and so forth. Such an incident demonstrates not only that effective public education can be given, but how it can be given. The medical man must first lead the way.

Medical Men and Municipal Honours.

THE Lord Mayor's Show—the traditional civic pageant which astonishes us annually by the extraordinary attraction that it exercises for the London crowd, but which demonstrates no less the respect of Londoners both within and without the historic boundaries for the corporation of the greatest city in the world and for its appointed head—has come and gone. This year, as all are aware, the Chief Magistrate has been found in the person of Sir THOMAS CROSBY. Whatever Sir THOMAS CROSBY'S other claims may be to fill the office associated with the names of London's merchant princes and commercial magnates, and no doubt they are many and good, for the medical profession the chief interest in his election lies in the fact that he is one of our own calling, who has connected himself intimately with the municipal life of the City of London, and who has proved that a successful physician can secure for himself the highest civic honours by bringing to bear upon the problems of social administration the virtues of honesty, industry, and accuracy that make for distinction in the pursuit of our science. If, however, this is the first occasion upon which a member of the medical profession has assumed mayoral duties in the City of London, it has been often otherwise in provincial boroughs. Many of our towns, great and small, in the provinces may claim by this method to have set an example of progress which for our part we hope to see followed more widely in every coming year. A list of the medical men who have now taken their seats as mayors for the ensuing year will be found upon p. 1447. We wish them every success in their high office, and we congratulate them no less because they have achieved positions honourable to themselves than because their having done so will, we feel sure, act as an incentive to many of their professional colleagues, who will endeavour to combine participation in municipal life with the pursuit of a profession in itself arduous and charged with grave responsibilities for its members.

Four years ago[1] we wrote of medical men in connexion with municipal life, for in that year recognition had been accorded to several by election to the office of mayor. Among them we congratulated Mr. N. W. FAIRLES-HUMPHREYS, who had already been mayor of Montgomery on eight occasions. We are glad to observe that he now enters into his thirteenth year of office. Wimbledon had then elected Dr. S. R. COLLIER; it now places another medical man in the chair of office in the person of Surgeon-General E. L. MCSHEEHY. Saffron Waldon in re-electing Dr. J. P. ATKINSON has been true to its past precedents, established not only during the present century but by the election of 17 medical mayors in the nineteenth century, and of six during the latter part of the eighteenth. A feature in the current list to which reference may be made is the presence of medical men as mayors in the south and west of England not observable in the list of 1907. Barnstaple, Exeter, and Lewes are the boroughs to which we refer in congratulating respectively Mr. J. R. HARPER, Dr. C. J. VLIELAND, and Mr. H. STOTT. These, with their medical colleagues who have attained the office of mayor in other boroughs, or who perhaps occupy less exalted seats upon municipal councils, will certainly have no less onerous duties to perform in the future than they have had in the past. On the contrary, the tasks of all who are undertaking local administration to-day, whether as members of urban or of rural authorities, are constantly being rendered more exacting, more complex, and more responsible, while it is upon the man with medical training that the increased responsibility falls most heavily, for it is he whose sphere of influence is constantly being enlarged by the new functions imposed by recent legislature. The advent of medical men to boards of local administration is a healthful sign of the progress of preventive medicine. During the last four or five years measures for the promotion of the public health have been passed of far-reaching significance, and while the field of preventive effort has been widened the development of measures to cope with the troubles so ascertained has been gradual. When the National Insurance Bill, now making its forceful way through the House of Commons in the hands of the Chancellor of the Exchequer, commences its effective existence as an Act of Parliament, whether that be now or later, the medical man in municipal life will, indeed, to use a popular phrase, "find his work cut out for him."

The administration of the Act will be in the hands of

[1] THE LANCET, Nov. 27th, 1907, p. 1473.

Insurance Committees upon which the insured persons will be very fully represented, whether members of the approved societies or not. They will have a numerical majority of at least one-third as compared with the other members of the committee, and of the minority only two, or in certain events three, will be elected by the medical men of every locality covered by the committee. Of the rest of the minority, as we have termed it, the measure enacts that "one-half shall be appointed by the council of the county or county borough," and the rest "shall be appointed by the Insurance Commissioners." The sources from which these members of the committees (exclusive of the two members to be elected by the medical men of the locality) are to be drawn are thus defined: "The members appointed by the council of the county or county borough shall consist wholly or in part of members of the local sanitary authorities, and two at least shall be women, and of the members appointed by the Insurance Commissioners one at least shall be a duly qualified medical practitioner and two at least shall be women." It is therefore obligatory that there shall be one medical practitioner upon every Insurance Committee, and it is intended, but not in terms rendered obligatory, that two more shall be elected to it by their medical colleagues, which constitutes a representation of three medical men out of a possible 80, which, regarded numerically, is very small. A most practical and important manner of increasing medical representation will be the availability for appointment by the county or borough councils of medical men who as members of the sanitary authority have impressed upon their neighbours their fitness for selection. Moreover, there is no reason why the Insurance Commissioners should not appoint more than the one member of the medical profession whom they are obliged to nominate if there are suitable men available for the purpose. In these circumstances the inference which we draw from the provisions of the National Insurance Bill, so far as they are practically settled, considered side by side with the mayoral elections, to which we have called attention, is that it is becoming more and more valuable to a community to be able to impress medical men into active municipal life. Now that sanitary matters are receiving so much attention, the medical local councillor must necessarily have opportunities to make his influence felt among his lay colleagues, quite apart from such questions as the administration of medical benefits under the National Insurance Bill or the consideration of the interests of his profession and of its members. It is for this reason that we welcome such proof of the successful adoption of civic life by medical men, as we have called attention to in connexion with the assumption of mayoral duties by medical practitioners.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The annual dinner of the Hospital and School will be held at the Trocadéro Restaurant, Piccadilly-circus, W., on Wednesday, Dec. 13th, at 6.45 for 7.15 P.M. Mr. Stanley Boyd will take the chair. Applications for dinner tickets, price 7*s.* 6*d.*, should be sent not later than Dec. 1st to the honorary secretaries, Dr. A. G. Pnear, 47, Weymouth-street, W., or Mr. T. P. Legg, 139, Harley-street, W.

Annotations.

"Ne quid nimis."

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

As we announced last week, a special meeting of the Council of the Royal College of Surgeons of England was held on Thursday, Nov. 9th, to receive the resignation of Sir Henry Butlin of his office as President of the College owing to ill-health. The whole medical profession will join in the regret which was expressed by the Council at Sir Henry Butlin's retirement and at the cause thereof, will trust that that cause will soon disappear, and will endorse the warm tribute which was then paid to him by a unanimous resolution of the Council. The late President held his important post with the greatest distinction and ability, and his services to the profession and the College will long be remembered. His tenure of office was remarkable for the fact that during a large part of it he discharged also the duties of President of the British Medical Association, and in both capacities earned the highest regard of those whom he led. Sir Henry Butlin's industry, his courtesy and fairness, and his gift of oratory, quite apart from his eminence as a surgeon, peculiarly fitted him for the position of titular surgical head of the profession, and it is greatly to be regretted that his physical powers have not proved equal to the heavy and continuous strain which his public duties have thrown upon them. All will unite in wishing him improved health now that he is free from the cares of office. His successor has been well chosen, and the Council of the College may be congratulated upon electing to the chair Mr. Rickman J. Godlee. The new President, as is well known to our readers, is surgeon to University College Hospital, Holme Professor of Clinical Surgery in the medical school of that hospital, and an honorary surgeon to the King. He has already done good work upon the Council of the College.

THE NEW MEDICAL OFFICER FOR THE COUNTY OF LONDON.

THE London County Council, on Nov. 14th, had before it the question of appointing a successor to Sir Shirley F. Murphy as head of the public health service of London, which, as reorganised, is to include the superintendence of the medical inspection and treatment of school children hitherto under the control of the education department, in circumstances which have been the subject of frequent comment in THE LANCET. The General Purposes Committee reported to the Council that 33 applications for the position of medical officer had been received, and these had been referred to a special subcommittee, on which the Public Health and Education Committees were represented. The subcommittee made a preliminary selection of 14 candidates whom they interviewed, and finally six candidates, chosen from these, attended before the General Purposes Committee. The committee had also seen Dr. James Kerr, the medical officer (education). After careful consideration of the merits of each candidate, the General Purposes Committee recommended: "That William Heaton Hamer, M.A., M.D., D.P.H. Cantab., B.Sc. Lond., M.R.C.S. Eng., F.R.C.P. Lond., be promoted, as from Jan. 1st, 1912, to be medical officer of health, and be appointed also school medical officer

for the County of London, at the commencing salary of £1250 a year." At the same time, to comply with a standing order that requires more than one name to be submitted to the Council, the Committee also mentioned the names of William James Howarth, M.D., Ch.B., D.P.H. Vict., medical officer of health for the County of Kent, and Harold Scurfield, M.D., C.M. Edin., D.P.H. Cantab., medical officer of health of the city of Sheffield. Mr. H. J. Greenwood, chairman of the General Purposes Committee, in moving the appointment of Dr. Hamer, said the committee and a special subcommittee had given to the question of this appointment the careful consideration its importance warranted. Whilst possibly there might have been some disappointment at the comparatively small number of applications for the post, it was generally felt that out of the 33 applications received there was certainly not a small number of gentlemen who were quite worthy by reason of their experience and attainments to be considered for the position. He was very glad heartily to commend to the Council the recommendation of the committee. Dr. Hamer's services were so well known that it would be almost an impertinence to go into them in detail. He had been in the service of the Council for almost 20 years, and the position he had held under the late medical officer of health, Sir Shirley Murphy, had afforded him experience in all the wide and intricate branches of the work that came within the scope of the Public Health Department. At the same time, under Standing Orders, the committee submitted the names of two other gentlemen, both candidates of the greatest ability and well known for their services, in one case to the city of Sheffield, and in the other to the county of Kent. Although it was true that both these gentlemen had had active experience in the new duties which it was proposed to cast in future upon the London County Council Public Health Department—viz., the superintendence of the medical inspection and treatment of school children—yet the General Purposes Committee felt that that experience, though valuable, was limited as compared with the natural needs of London, and had been gained in circumstances which to a large extent would not obtain in the metropolis. Naturally, Dr. Hamer had not had the opportunity of showing his ability in the particular direction of school medical work, but his many other attainments and enormously superior position in almost every other detail of his work left no doubt in the mind of the committee that of the three candidates he was the one the Council should appoint. Mr. Greenwood expressed the conviction that in appointing Dr. Hamer the Council would be selecting a gentleman who would not only fill the position to the very utmost of his ability, but to the greatest credit of the Council and of the County of London. The proposal was accepted without further debate and amid a general chorus of approval, to which chorus we take the liberty of adding our own voice.

LATE OR RETROGRADE INFANTILISM OF THE ADULT.

SOME five years ago M. Ch. Gandy, at a meeting of the Société Médicale des Hôpitaux de Paris, showed two patients presenting a peculiar dystrophic syndrome, which concerned more particularly the sexual system. Each of the patients had attained the full normal development of the adult, but some time after the age of 30 a gradual and striking change set in, consisting of a regression of primary and secondary sexual characteristics. The genitalia atrophied and lost their functional capacity; the hair of the moustache, the chin, the axillæ, and the pubes began to fall out. From a state of virility the patients sank into a sort of infantilism such as is found in the pre-pubescent period. On June 23rd of this year M. Gandy exhibited another still more striking case of retrograde infantilism at a meeting of the same society. The patient was a man aged 42, who had been married twice, and had had three children. Some 12 years previously, at about the age of 30, certain somatic alterations had very gradually made their appearance, without obvious cause. The parts usually covered with hair (the scalp not included) had become bare, sexual impotence and atrophy of the genitalia had set in, and the face, hands, and feet had become puffy. On examination it was noted that the face had a curious waxy pallor, and was smooth like that of a child, with the exception of a few short hairs on the chin; the skin was dry and showed very fine folds, especially on the forehead and on the lower parts of the cheeks. The skin of the trunk and limbs was equally pale, smooth, fine, and soft; there was little or no subcutaneous fat; the nipples were small and devoid of all pigment. A very few short, fine hairs were left on the pubes. The external genitalia resembled those of a child; the penis, scrotum, and testicles were all small. No trace of the thyroid gland was discoverable by palpation. There was no alteration of the visual fields, no polyuria or glycosuria. The only previous illness of any significance was a left gonorrhœal orchitis of about 14 days' duration, which had developed about the same time as the commencement of the general symptoms. Some 18 cases of the condition, of which only two concern the female sex, are now on record. It is quite possible that at least some of the cases described as degeneratio adiposo-genitalis of hypophyseal origin (Fröhlich) ought to be regarded as closely associated to the syndrome under discussion. The main features of the condition are (1) its development after puberty is established in subjects who have all the normal secondary sexual characteristics; and (2) its selective dystrophic action on all that pertains to the sexual sphere. Apart from this, the changes in the skin are specially noteworthy, for they are certainly closely akin to what obtains in myxœdema. The puffiness, smoothness, pallor, and the finely folded, finely wrinkled skin are just such as are met with in that disease. The whole appearance of the patient affected with retrograde infantilism is unmistakeable, but sometimes other symptoms are present and may be considered part of the syndrome. Mental apathy and indifference may be noted; muscular enfeeblement is frequent; the pulse is small and the arterial tension low. Occasionally a sort of diabetes insipidus occurs, with polyuria and polydipsia. Once the condition is established no further change ensues, as a rule, and the patients may remain as it were immobilised in this infantilism for years. M. Gandy is of the opinion that the pathogenic basis of the disease is the combination of thyroid and testicular impairment. In three cases where a pathological examination was made the thyroid was markedly atrophic and showed unmistakeable inflammatory and sclerotic changes, whereas the appearance of the testicles suggested rather a simple regressive atrophy. It is difficult to say whether the pituitary plays any part in the development of the condition, and equally difficult to adjudicate on the relative importance of what seem to be the more definite pathogenic factors. In fact, though a general pathological agent may act on several of the glands concerned with internal secretion, producing recognisable lesions in them, it does not follow that these are a proof of the participation of the glands in the genesis of the syndrome; such lesions cannot by themselves be held to demonstrate a pathogenic rôle on the part of the glands concerned, as Brissaud maintained. Not a few cases of testicular atrophy are on record where no symptoms that might be ascribed to testicular insufficiency developed. Karakascheff has published a case of this type of infantilism where the main pathological lesion was atrophy of the suprarenal glands. Where definite signs of feminism

(hypertrophied mammary glands, &c.) supervene on the establishment of retrograde infantilism, as in cases reported by Lereboullet and Josserand, the problem becomes still more complex.

THE NATIONAL INSURANCE BILL: AN IMPORTANT MEETING.

A MASS meeting of the medical profession in Lancashire and Cheshire has been called for to-day (Saturday, Nov. 18th), at 3.30 P.M., in the Midland Hotel, Manchester, to discuss the medical clauses of the National Insurance Bill, and to pass a resolution stating that as at present framed the Bill does not embody the demands of the medical profession, that it is unworkable, and dangerous to the public health. All members of the medical profession in Lancashire and Cheshire are earnestly requested to attend.

SOME OBSERVATIONS ON THE DECOMPOSITION PRODUCTS OF SUGARS.

IN spite of the large amount of research which has been devoted to the elucidation of the problems of the metabolism of sugar in the animal organism, it must be confessed, as Abderhalden has stated, that exact details of the processes of oxidation of glucose, the sugar chiefly concerned, are wanting. Some interesting observations, made from a chemical standpoint by Professor Adolf Jolles, of Vienna, and published in the *Wiener Medizinische Wochenschrift* of Nov. 4th, seem calculated to throw considerable light on this subject and to stimulate further research from a physiological aspect. He has investigated the action of various oxidising agents upon a number of different sugars, including arabinose, rhamnose, dextrose, lævulose, invert sugar, mannose, galactose, cane sugar, maltose, and lactose in weak alkaline solutions at 37 °C. In general the strength of the solutions was 1 per cent. of sugar made N/100 alkaline with sodium hydrate. In every case with the exception of cane sugar a diminution in the rotating power of the solution occurs together with the formation of acids. The alteration in the rotating power had been demonstrated previously by Lobry de Bruyn and van Ekenstein. Professor Jolles has devoted his experiments chiefly to the determination of the acids formed. He finds that neutralisation of the alkali produces marked slowing in the formation of the acids, while with glucose in N/100 acid solution acid formation does not occur and the sugar remains unaltered. By means of the addition to the solutions of hydrogen peroxide the oxidation processes were accelerated, occurring more quickly than when the oxygen in the air was used as the oxidising agent. Lævulose was found to produce more acid than dextrose, and therefore to be more easily oxidisable. The oxidation products obtained comprised ethyl alcohol, acetaldehyd, acetone, formic, acetic, butyric, lactic, glycolic, oxalic, succinic, aceto-acetic, and glycuronic acids. With most sugars the chief product was formic acid, a very small quantity of acetaldehyd and an acid which gave Tollen's naphtho-resorcin reaction for glycuronic acid. Lactic acid was only obtained in alkaline solutions of dextrose without the addition of hydrogen peroxide. The use of oxide of silver as an oxidising reagent gave similar results to those obtained with hydrogen peroxide. Ammonia and sodium carbonate do not influence the decomposition of sugar as strongly as sodium hydrate. Professor Jolles has developed his researches in several ways. Since cane sugar does not undergo the same decomposition in alkaline solution as the other sugars, he has utilised this property to develop a method for the quantitative estimation of cane sugar in the presence of other optically active sugars. He makes the mixture alkaline, keeps it for 24 hours at 37° C., by which time the other sugars have become optically inactive, and hence the cane sugar can be determined from the difference in the rotating power of the solution at the beginning and the end of the experiment. He has also devoted much attention to the formation of glycuronic acid. This acid has been found in the urine and the blood and in the liver, but always in combination, usually with phenol, indol, or skatol. The usual quantity is small, but is increased by the administration of certain substances such as chloral hydrate, camphor, and menthol. The composition of this acid suggests its probable origin in the body from glucose, but according to Professor Jolles the direct demonstration of this was wanting before his own experiments. He describes in detail the method of obtaining glycuronic acid from sugar and the tests he employed for its identification. He proceeds to apply his observations upon the decomposition of sugars *in vitro* to the elucidation of the problems of glycolysis in the organism. Lépine has regarded the breaking up of glucose in the body as due to a glycolytic ferment present in the blood and tissues. Cohnheim has isolated from the pancreas a substance which can activate the glycolytic ferment present in the muscles. Professor Jolles is of opinion that the conditions of his experiments approximate to those in the body. The blood with its definite alkalinity permeates the tissues, and the peroxidases, catalases, and other oxidising ferments can be regarded as exerting a similar action to the hydrogen peroxide in his chemical experiments. He suggests that the sugar in the tissues is oxidised to acids of low molecular weight, such as formic acid, which are further oxidised in the blood to carbon-dioxide and water. He also shows how his observations can be adapted to explain glycolysis in muscle, the formation of sarcolactic acid, of glycuronic acid, and even some of the features of diabetes and pentosuria. He is careful to state, however, that these speculations are hypothetical and are not supported by physiological experiments. His observations are certainly suggestive and are worthy of careful consideration. They should form the basis of further physiological work upon this question of glycolysis in the body.

BACTERIOLOGY OF CONJUNCTIVITIS.

THE differentiation of various forms of conjunctivitis by an investigation of their bacteriology has been of the greatest clinical value. Progress in medicine is associated with the subdivision of large groups of cases having broad clinical resemblances into smaller groups separated from one another on etiological grounds, and ophthalmic practice furnishes good examples of this process. By simple smear preparations of ocular secretions results of great practical importance are quickly and readily obtained, as the various organisms associated with varieties of conjunctivitis can be recognised with some certainty by their morphology, and appropriate treatment may be at once commenced. Axenfeld is indeed inclined to consider that cultural methods rarely yield better results than simple examination, and may indeed lead to mistakes owing to the growth of saprophytes which may mask the more important pathogenic organisms which are often of difficult culture. An interesting paper[1] by Dr. J. P. McGowan and Mr. W. Macrae Taylor shows, however, that the examination by culture of the organisms present may lead to a further differentiation of cases which would otherwise be confused. They record a school epidemic, involving from first to last some 49 patients, which would have been regarded as an outbreak of pneumococcal conjunctivitis had the diagnosis been made on the examination of simple smear preparations. In all the cases examined, five in number, an

[1] THE LANCET, Nov. 11th, 1911, p. 1324.

organism was isolated which, while morphologically identical with the pneumococcus, nevertheless differed from that organism, as usually described, in its fermentative activity, the character of its growth in rabbit serum, and especially in its complete non-pathogenicity for those animals which are usually highly susceptible to the pneumococcus. The organism thus separated and carefully studied certainly differs in important respects from the typical pneumococcus, though opinions may possibly differ as to whether these variations could be regarded as of specific value in such a notoriously variable member of that highly variable group, the streptococci. It is, however, by such accurate and careful investigations that we hope for advance.

THE RAG FLOCK BILL.

THE Rag Flock Bill was read a third time and passed in the House of Commons on Tuesday last, and was introduced into the House of Lords on the following day. The measure, an unquestionably important piece of sanitary legislation which has been demanded for a long time, will undoubtedly receive the Royal assent in the course of a few weeks. Our own practical inquiries have shown that when uncontrolled in regard to the cleansing of the rags by thorough washing, the rag flock business may easily be a menace to the public health. When it is remembered how filthy the raw materials can be, it is evident that the public need some efficient protection in this matter. We believe that when the provisions of the measure are thoroughly enforced the reproach that has long hung over the industry will be removed, and further that the interests of the trade will gain rather than suffer.

THE PHYSIOLOGICAL STANDARDISATION OF ERGOT.

THE latest contribution to our knowledge of ergot comes in the form of a Bulletin[1] by Dr. C. W. Edmunds, of the University of Michigan, and Dr. Worth Hale, of the Hygienic Laboratory, Washington, D.C. The investigation was undertaken with a view of ascertaining which of the many methods of standardising ergot is best suited for the purpose. Kobert, whose labours have thrown considerable light on the composition of the active principles of ergot, described this drug as one of the most important medicines, but one of the hardest to estimate. The authors of the Bulletin preface their own work by an illuminating historical summary of the methods now in use for standardising ergot, with full abstracts of many important recent papers that are not accessible to the majority of readers. The importance of establishing a standard method of assay is well illustrated by an incident that occurred in England in 1909. A specimen of a fluid extract of ergot was submitted to three different physiological experts, one of whom condemned the sample, while the other two considered it satisfactory. The cock's-comb, uterine, and blood pressure methods were tried with a series of fluid extracts and special preparations of ergot, and the results were compared with those derived from the chemical determination of the cornutin of Keller and the amount of benzol extractive. These chemical methods showed but little relation to the biological methods, and the authors consider that the latter should be used as a means of insuring to those who require the drug a remedy both potent and of uniform strength. For this purpose the cock's-comb method is recommended on practical grounds in preference to the uterus method. These two methods yielded almost identical results, and they may therefore be taken as indicating the true relative strengths of the different specimens. It was found that an absolute parallelism does not exist between the uterine and the blood pressure action of ergot. This may possibly be accounted for by the probability that in the process of manufacture an unusually large amount of putrefactive amines may have been formed, which would have the tendency to raise the blood pressure value without increasing the strength of the preparation as measured by its action on the uterus. These results are interesting, inasmuch as the cock's-comb method has been unfavourably reported upon whenever it has been mentioned in the literature of the past few years, doubt having been thrown on its value as a criterion of the therapeutic activity of preparations of ergot when applied to the human uterus. The examination of many leading pharmaceutical preparations of ergot by these different methods led to the conclusion that such preparations should be marked with the date of manufacture, as they deteriorate quite rapidly. From the standpoint of both physician and patient an interesting part of the research relates to the varying activity of the leading American preparations of ergot. The fluid extracts examined differed greatly in strength, some being only about one-fourth as strong as a preparation freshly made from Spanish ergot. Non-pharmacopœial preparations showed even greater discrepancies between the strengths claimed and those actually found. For example, one proprietary preparation, stated to be two and a half times as strong as a fluid extract, was found by experiment to be only one-third the strength of a fluid extract. Indeed, it was 50 per cent. weaker than a fluid extract made by the same firm. It is suggested that makers of preparations of ergot should refrain from using such phrases as "ergot in permanent solution" in their advertising literature until more reliable methods of manufacture are devised. The practical application of this valuable research into the literature and physiological action of ergot and its preparations is obvious. Physicians will do well to employ only reasonably fresh preparations of the drug, made with care so that putrefactive changes may be avoided as far as possible. Needless to say, the drug itself should be not more than one year old, free from mould and sound in every way.

[1] Bulletin No. 76, Hygienic Laboratory, United States Public Health and Marine Hospital Service, Washington, 1911, pp. 58.

THE SENSE OF PRESSURE IN THE FACE, EYE, AND TONGUE.

IN the current issue of *Brain* there is an article by Dr. W. J. Maloney, of Fordham University, New York, and Dr. Foster Kennedy, of Cornell University, New York, on the sense of pressure in the face, eye, and tongue, that contains a record of original investigations which may prove to be important. Notwithstanding the large amount of attention that has been directed to the question of the sensory innervation of the face, there are still certain points on which our knowledge is very incomplete. One of these is the problem as to whether the fifth or the seventh cranial nerve, or both, or neither, but some other quite different nerve, conveys afferent impressions from the deeper parts of the facial tissues. The evidence drawn from an examination of cases in which the Gasserian ganglion had been removed for trigeminal neuralgia has been so contradictory that Dr. Maloney and Dr. Kennedy determined to reinvestigate the matter for themselves. Their material comprised eight cases of removal of the Gasserian ganglion and ten cases of complete peripheral seventh nerve palsy from lesions at various levels, arising from several causes, in addition to certain cases of fifth or seventh nerve palsy from central lesions. Pressure-touch, pressure-pain, and the localisation of these were carefully tested on the affected face, eye, and tongue. With the pressure-sense of the tongue the peripheral hypoglossal nerve appears to have nothing to do, for in two cases of

facio-hypoglossal anastomosis for facial palsy, in which the twelfth nerve had been cut across and re-establishment of continuity rendered impossible, there was no alteration of that sense whatever. Nor do the fibres underlying it run in the chorda tympani, since three cases of facial palsy in which there was clear indication that the latter was implicated showed no defect of pressure-sense either. On the other hand, the Gasserian ganglion cases established the fact that the pressure-pain fibres for the eye are invariably affected by removal of the ganglion. The loss on the cheek to pressure-pain is always less than on the forehead, and on the lips than on the cheek. A critical consideration of their results leads Dr. Maloney and Dr. Kennedy to conclude that the fibres conveying impulses from pressure-touch probably run in the peripheral branches of the fifth nerve and certainly enter the Gasserian ganglion, but there is evidence to show that there are alternative courses for certain impulses connected with deep sensibility. These alternative nerve mechanisms are the seventh nerve and the sympathetic. Some of the cases examined make it clear that certain at least of the pressure-pain fibres from the face are associated with the facial nerve in the Fallopian canal, but they must pass through the region of the fifth nerve roots before entering the canal. Dr. Maloney and Dr. Kennedy suppose they run by way of Meckel's ganglion and the Vidian nerve to the geniculate ganglion. After the seventh nerve leaves the canal it is purely motor in function. It is possible that the sympathetic system conveys certain pressure-sense fibres associated with a general crude sensibility to pressure-pain, and that the intactness of this system explains the conservation of pressure-pain in the tongue under the circumstances described above. On the other hand, the involvement of the system from injury to carotid and cavernous plexus fibres at the time of operation may explain the permanent loss of pressure-pain in the eye and forehead on the affected side in the gasseriectomy cases.

CEREBRAL ABSCESS COMPLICATING AMŒBIC DYSENTERY.

IT is not surprising that the amœba coli, which so often infects the liver by way of the portal vein, should occasionally reach other organs and tissues through the systemic circulation. Indeed, a general dysenteric pyæmia might be expected to occur more frequently than is actually the case. An occasional and important consequence of diffusion of the amœbic infection is suppuration within the brain. Professor O. Jacob, writing in the *Revue de Chirurgie* for October, has collected records of nine cases from the literature, mostly by French authors, to which he adds a very full description of two cases under his own care. The first record was made by Julien in 1864, and, as in all the others, concerned a case of cerebral abscess complicating dysentery, in which hepatic suppuration had already occurred. The amœbic nature of the lesion was proved in four cases only, including the two reported by Jacob himself; in the others it was possible or probable that suppuration was provoked by other and secondary infective agents. Cerebral abscess occurs, according to Kartulis's observations in Alexandria, in over 3 per cent. of all cases of purulent dysenteric hepatitis; and though this is higher than the usual experience of tropical clinicians would indicate, it is probable that a routine examination of the cranial contents in all necropsies, such as Kartulis practised, would yield a similar result. Men are affected much oftener than women, and the age of the patient always lies between 20 and 50 years. Suppuration within the skull appears more likely to occur if the hepatic abscess communicate with the respiratory tract. No part of the brain is specially liable, but so far no case has occurred within the cerebellum. The abscess is usually single, and attains the size of a large egg. Meningitis is the exception, and consequently lumbar puncture yields a clear fluid. There is no encysting membrane, the abscess being in actual fact a necrotic area, softening to the consistence of pus in the middle and delimited by an inflammatory zone. Microscopic examination will discover the presence of amœbæ in this limiting area. The symptoms are not different from those of cerebral abscess in general; there is headache, which may or may not be localised in the region affected, the toxic evidences of suppuration are not conspicuous, and there is almost no proof of increased intracranial tension. Localising phenomena may or may not be present, according to the site of the lesion. Jacob in one of his cases was enabled to trephine over an abscess in the right temporal lobe and drain it, by the discovery of left bilateral homonymous hemianopsia and paresis of the left arm. Neither in this case nor in the other which he reports, however, was the operation successful in saving life; and as these are the only examples of surgical treatment hitherto recorded, the history of amœbic abscess of the brain is up to now one of uniform failure. One or two suggestions of importance in regard to technique are worthy of record. Extensive trephining is necessary, and the abscess should be sought for with a channelled sound and not with an aspirating needle, since the pus is viscid and runs reluctantly. For the same reason it is essential to provide freely for drainage. Possibly an earlier attack upon the disease may in the future give happier results.

SO-CALLED SYNONYMOUS PRODUCTS.

A GOOD deal has been said and written concerning the practice, which seems to be growing rather than diminishing, of marketing medicinal articles, identical in composition, under a variety of protected names. The subject, both in its legal and common-sense aspect, was fully discussed in THE LANCET of Nov. 17th, 1906, p. 1391, and on more recent occasions has been dealt with from other points of view. The literature of the subject is, in fact, extensive, and additions to it are being made constantly. In the *Pharmaceutische Zeitung* of April 26th, p. 327, there appeared a translation of an article contributed to the Russian "Official Medical Almanac" for 1911 by Professor B. J. Slowzow, in which the question is approached from a practical standpoint. He deplores the bewildering multiplicity of "new medicinal agents," many of which are merely imitations of, or are claimed to be synonymous with, well-known synthetic products, and shows that many of the preparations which are claimed to be of the same chemical composition as well-known branded products differ from them materially. The question arises as to what results must be expected from the employment of "imitations," and in this connexion he gives instances showing how a well-known product got a bad name because a "synonymous" article which had been substituted caused "œdema of the nasal mucous membrane and violent perspiration." Professor Slowzow suggests that medical practitioners could do a good deal to improve matters by the simple process of adding the maker's name when prescribing this or that preparation. This is not so simple as it seems, for the difficulty is in finding out which maker's name to add.

IN view of their departure for India the Duke of Teck and Viscount Iveagh, two of the three Governors of King Edward's Hospital Fund for London, have, with the approval of His Majesty the King, Patron of the Fund, and the concurrence of the Speaker of the House of Commons, appointed the Earl of Donoughmore, Lord Chairman of Committees of the

House of Lords, and the Right Hon. Sir T. Vesey Strong, Bart., K.C.V.O., to act with the Speaker as a committee to exercise the powers of the Governors until their return.

THE British Institute of Social Service and the National League for Physical Education and Improvement are holding a joint conference on "Some Preventive Measures against Consumption" in the library of the institute, 4, Tavistock-square, on Wednesday, Nov. 22nd, at 5 P.M. Free tickets of admission may be obtained on application to the secretary at that address. The chair will be occupied by Dr. Arthur Newsholme, chief medical officer to the Local Government Board.

AT the meeting of the Medical Society of London held last Monday Dr. F. W. Mott opened an interesting debate upon the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System in words which we reproduce in full in another column of THE LANCET. An interesting debate ensued thereon, which has been adjourned until Monday next, Nov. 20th.

AT the seventh annual public meeting of the Association of Women Pharmacists, to be held in the lecture theatre of the Pharmaceutical Society, at 17, Bloomsbury-square, W.C., on Monday, Nov. 20th, at 8 P.M., an address will be given by Professor W. E. Dixon on the Relation of the Pharmacist to Therapeutics.

Dr. Henry Curwen has received the King's Royal Licence to accept and wear the decoration of the Fourth Class of the Order of El Aliyeh which has been conferred upon him by the Sultan of Zanzibar in recognition of valuable service rendered while employed under the Zanzibar Government.

Sir Thomas Boor Crosby, M.D., Lord Mayor of London, has accepted the invitation of the Council and the Head Master of Epsom College to distribute the prizes and to address the boys on the next Founder's Day, which falls on July 27th, 1912.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ORDINARY MEETING OF THE COUNCIL.

AN ordinary meeting of the Council was held on Nov. 9th, Mr. C. W. MANSELL MOULLIN, Vice-President, being in the chair.

It was resolved to issue Diplomas of Membership to 80 successful candidates.

At the recent examination for the Diploma of Tropical Medicine, which was the first examination held, only one candidate presented himself, and he passed the examination. The successful candidate was Dr. James Bruce-Bays, of Grahamstown, Cape Colony.

A report was received from the Board of Examiners in Dental Surgery dealing with the report of the Inspector of the General Medical Council on the Final Examination for the Licence. *Inter alia* it suggests a revision of the syllabus of the examination in Surgery and Surgical Pathology, and it was approved.

A report was received from the Committee of Management; in it were considered the facts and suggestions contained in the report of the Public Health Committee of the General Medical Council. The report was received and adopted, and it was resolved to send it to the General Medical Council.

The VICE-PRESIDENT reported that Mr. Hallett had been invited by the Council on Medical Education of the American Medical Association to attend the conference on Medical Education to be held in Chicago on Feb. 26th, 1912, and address the meeting on the subject of the methods of conducting examinations for licences to practise medicine adopted by the Conjoint Examining Board in England, and that after consultation with the chairman of the Committee of Management Sir Henry Butlin had agreed with the President of the Royal College of Physicians to give Mr. Hallett leave to accept the invitation.

The VICE-PRESIDENT reported that the Bradshaw Lecture would be delivered by Mr. R. Clement Lucas on Wednesday, Dec. 6th, at 5 o'clock P.M., and that the subject of the lecture would be "Some Points in Heredity."

SPECIAL MEETING OF THE COUNCIL.

As we announced in THE LANCET of last week a special meeting of the Council was held on Nov. 9th to receive the resignation of the President, Sir Henry T. Butlin. The resignation was accepted with regret, and the following resolution was moved by Sir HENRY MORRIS, seconded by Mr. EDMUND OWEN, and carried unanimously:—

In accepting the resignation of the President of the College, as they very regretfully and reluctantly have just done, the Council desire to convey to Sir Henry Butlin the expression of their deep sympathy with him in that he has been compelled on account of illness to curtail the period during which he otherwise would have held the position of President of the Royal College of Surgeons of England.

The Council fully recognise and appreciate the intrepid and unflinching manner in which Sir Henry Butlin, in spite of imperfect health and impaired strength, has throughout performed the varied and important duties of President, and they share with him the disappointment, which they are sure he himself keenly feels, that he is not physically able to continue in office any longer.

The Council, moreover, desire to express their admiration for the ability, dignity, and courtesy with which Sir Henry Butlin has represented the College, and to assure him that the high standard of his example will always be remembered and cherished by his colleagues.

The Council then elected Mr. Rickman J. Godlee to fill the vacant post of President.

TUBERCULOSIS IN SCHOOL CHILDREN.

IN THE LANCET of Nov. 4th (p. 1278) we referred in general terms to the interesting report of the Chief Medical Officer of the Board of Education. One of the most important sections of that report deals with the various aspects of tuberculosis in school children. The subject of tuberculosis in young life has until recently received more attention in France than in this country, and the numerous institutions which have been formed for the care of "consumptive" children throughout that country, and the absence of similar provision for adults, bear a singular contrast to the methods which have been adopted in this country. With the advent of the school medical officers, however, much more attention is being drawn to the incidence of tuberculosis, especially of the pulmonary variety, in children at the school age, and the observations and suggestions to be found in Sir George Newman's report are well worthy of study.

The section to which we have referred deals with three chief issues relating to tuberculosis in children: 1. The Findings of School Medical Officers. 2. Existing Provision for Treatment. 3. Suggestions for Treatment by the Local Education Authority.

Findings of School Medical Officers.

In the first of these divisions especial stress is laid on the difficulties of diagnosis. This is shown by the considerable difference in the percentage of cases discovered in various areas. In Worcestershire, for instance, owing to the fact that one of the assistant medical officers diagnosed pulmonary tuberculosis in about 15 per cent. of the children examined, the percentage of cases discovered is 4·18. On the other hand, in Hertfordshire, out of a total of 12,772 children examined, one case of tuberculosis only was recorded. In children the diagnosis of early pulmonary tuberculosis is admittedly difficult, and must be especially so in the course of routine medical inspection; one reason is that it is more difficult to obtain sputum from children than from adults, and consequently the bacteriological test can frequently not be carried out. The von Pirquet test has been applied by some of the officers, but opinion is by no means unanimous as to its true diagnostic value.

We remark with satisfaction that the home conditions of tuberculous children have been investigated in a number of areas. This is a matter which we consider should be encouraged, if not insisted upon, wherever possible. The report states that whenever such investigations have been made the home surroundings, and particularly the sleeping arrangements, have almost always been unsatisfactory, and the need for inspection and supervision of the homes, together with the giving of advice and practical assistance, becomes increasingly evident. We have frequently insisted on the fact that the "fight against consumption" is inseparable from the housing problem, and until the slums are

cleared and the working classes are properly instructed in the need of cleanliness and of ventilation of the living rooms, but little real progress will be made towards the eradication of the disease. These remarks apply both to urban and rural districts. We trust, therefore, that the education authorities will speedily act upon the suggestions of the medical officer to the Board of Education.

Existing Provisions for Treatment.

In the second division of this section an account is given of the existing provisions for the treatment of tuberculous children. The special means already established are: (*a*) Hospitals and hospital schools; (*b*) sanatoriums and sanatorium schools; and (*c*) open-air schools, schools for physically defective (cripple) children. Institutions of these characters are but few in number, but their success shows that if more were provided much good would result.

A Scheme for the Prevention of Tuberculosis.

The third division is headed "Suggestions for the Treatment of Tuberculous Children by the Local Education Authority," and Sir George Newman very rightly remarks: "The time has perhaps come for education authorities carefully to consider their responsibilities with regard to the cases of tuberculosis among children occurring in their areas. For whilst it is true that the problem of tuberculosis, as a whole, does not come directly within the purview of the Local Education Authority, it is becoming more evident that the authority is, in fact, somewhat deeply concerned." We entirely endorse the remark that any national scheme for the prevention of tuberculosis is conspicuously incomplete without special arrangements for dealing with the disease among children, and it seems clear, therefore, as is mentioned in the report, that education authorities by means of their school medical service have the opportunity of playing an extremely important, and indeed essential, part in the prevention and cure of tuberculosis.

Sir George Newman then gives details of "A Scheme for the Prevention of Tuberculosis." In the first instance he insists that "all stages of phthisis should be notifiable, and notification should be made to the medical officer of health." The arguments which have been advanced for and against this suggestion are very forcible, and if such a proposal could be carried to its logical and practical conclusions—that is to say, if every case notified were visited by the medical officer of health, and if his directions as to the destruction or satisfactory alterations of unhealthy tenements were rigidly carried out—then, indeed, a most important step towards the prevention of tuberculosis will have been established. Notification, to be effectual, is a costly proceeding; already pulmonary tuberculosis is compulsory in institutions under the Poor-law and in all hospitals and institutions supported by voluntary contributions, and some experience of this measure as it is now practised is necessary before definite conclusions as to its utility can be formed. The establishment of "tuberculosis" dispensaries is undoubtedly a step in advance, and we agree that they should either be controlled by the medical officer of health and his assistants, or, if they are provided by voluntary associations, they should be intimately connected with the public health and school medical services. Perhaps the most important function they would fulfil would be to give practical advice as to personal and general hygiene.

The third suggestion under this scheme is as to the provision for the actual treatment of children. From the dispensary or school inspection clinic appropriate cases of the disease in children would be referred to a hospital, a sanatorium, a sanatorium school, a residential tuberculosis school, an open-air school, or a special day school. To carry this out a vast organisation would be necessary, but we believe the result would fully warrant the expense which would be entailed, for, once more to quote the report, "It is essential to the extermination of the disease that the early treatment of tuberculous children should receive attention."

In considering the relation between the pre-tuberculous school-child and the tuberculous adult there may lie one of our most important methods of checking phthisis.

Dr. A. Emrys-Jones has been reappointed a member of the medical board of the University of Wales for a further period of three years.

BRITISH MEDICAL BENEVOLENT FUND.

AT the October meeting of the committee 34 cases were considered and grants amounting to £253 made to 26 of the applicants. As the treasurer had reported that the account at the bank was already overdrawn to the extent of £95 the total deficit is now £348. Additional help is urgently needed, for applications at this time of the year are not only very numerous but most distressing. Contributions may be sent to the honorary treasurer, Dr. Samuel West, 15, Wimpole-street, W. Appended is an abstract of the cases relieved:—

Daughter, aged 66, of late M.D. St. Andrews. Only income a small annuity purchased by friends, and is in such poor health that work is impossible. Relieved four times, £48. Voted £12.

Daughter, aged 60, of late F.R.C.S. Has maintained herself as companion, housekeeper, &c., for several years, but for the last 18 months has been unable to obtain any post. Relieved twice, £10. Voted £5.

Widow, aged 56, of L.R.C.P. Edin. No income. Health very indifferent and dependent on two children who can ill afford to help. Relieved four times, £40. Voted £10.

Daughter, aged 68, of late L.S.A. No income and quite unable to earn a living. Relieved four times, £40. Voted £10.

Daughter, aged 50, of late M.R.C.S. Has had some very good posts as daily governess, but for the last nine months has been unable to obtain any work in spite of every effort. Small savings exhausted. Voted £10.

Daughter, aged 37, of late L.R.C.P. Edin. Used to maintain herself by teaching languages, but broke down in health two years ago and is still unfit for regular work. Voted £2 and given the offer of being taken in at a hospital for a rest cure before the reconsideration of her case.

Daughter, aged 48, of late L.F.P.S. Glasg. Has supported herself for some years by letting lodgings at a small seaside place, but earnings during the recent season have been insufficient to provide for the winter. Voted £10.

Widow, aged 44, of L.S.A. Unprovided for at recent death of husband, but has been promised a post in New Zealand and had the passage money provided by relations. Asks for a little help towards immediate needs before leaving this country. Voted £5.

Daughter, aged 76, of a late surgeon in the Scots Guards. Lost her income through a defaulting trustee several years ago and is now dependent on an old-age pension and slight occasional help from relations. Relieved twice, £33. Voted £15.

Widow, aged 79, of F.R.C.S. Has a small income, but being a chronic invalid is compelled to incur expenses for which it is insufficient. Voted £10.

Daughter, aged 64, of late M.R.C.S. Only income £10 per annum from another charity and is nearly blind. Relieved six times, £54. Voted £12.

Widow, aged 63, of L.R.C.P., L.R.C.S. Edin. Endeavours to support herself by letting rooms and teaching, but has lost most of her pupils and the rooms have been vacant for some weeks. Relieved 12 times, £92. Voted £5.

Widow, aged 64, of L.F.P.S. Glasg. Only income a pension of £24 per annum; children unable to help and health feeble. Relieved three times, £20. Voted £10.

Widow, aged 71, of M.R.C.S. Dependent on an old-age pension and slight assistance from children. Relieved six times, £74. Voted £12.

Widow, aged 73, of L.R.C.S. Edin. Kept a school for some years after husband's death, but has recently been practically dependent on a boarder who left a few months ago after a stay of ten years. Relieved five times, £39. Voted £5.

Daughter, aged 60, of late M.R.C.S. No income and dependent on a sister who only has two small annuities from charitable societies. Relieved twice, £20. Voted £12.

Widow, aged 71, of M.D. St. Andrews. Supported herself for several years after husband's death, but is now quite without means; children only give slight irregular help. Relieved four times, £54. Voted £12 and recommended to apply for an old-age pension.

Widow, aged 50, of L.R.C.P.I. Quite unprovided for at husband's death a few years ago, and being in feeble health is dependent on a daughter who teaches music. Relieved four times, £48. Voted £12.

Daughter, aged 52, of late L.R.C.P. Edin. No income, and quite unable to support herself owing to continuous ill-health. Relieved twice, £20. Voted £12.

Daughter, aged 59, of late M.D. Lond. Only income £7 a year, and totally incapacitated by a nervous disease. Relieved twice, £24. Voted £2, and recommended to apply for admission to an infirmary.

Widow, aged 73, of L.R.C.P. Edin. Supplements an income of a few shillings a week by letting rooms, but finds increasing difficulty in obtaining lodgers. Relieved once, £12. Voted £12.

Widow, aged 44, of M.R.C.S. No income; supports herself by letting lodgings but wants help to tide over the winter and to give a daughter lessons in shorthand. Relieved twice, £25. Voted £10.

Widow, aged 63, of M.R.C.S. No income and has just been obliged to give up a post as companion on account of a nervous complaint. Relieved twice, £24. Voted £12.

Daughter, aged 39, of late F.R.C.S. Has been practically incapacitated for some years by tubercular disease of a large joint but hopes to shortly resume work. Only means of subsistence meanwhile 2s. 6d. per week from another charity. Relieved five times, £60. Voted £12.

Daughter, aged 62, of late M.R.C.S. Receives a few shillings a week from friends, but is unable to earn anything. Relieved seven times, £78. Voted £12.

Daughter, aged 69, of late M.R.C.S. No income, and dependent on a brother whose means are very small. Has recently undergone a severe operation. Relieved once, £12. Voted £12.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH FOR 1910.

County of Middlesex.—In reporting on the administration of the Midwives Act Dr. C. W. F. Young states that during 1910 as many as 283 midwives notified to the county council that they intended to act as midwives, and that in addition 466 other certified midwives reside in the county. Of the practising midwives only 91 are now enrolled by reason of having been in *bonâ fide* practice before the passing of the Act, the rest being qualified by examination. Dr. Young considers that the county is well supplied with midwives, and that many of them do not attend a large number of cases, though they are anxious to do so. Out of some 27,000 births, it is estimated that 9482 were attended by registered women as midwives and 1356 by nurses under medical men. Medical aid notifications were received in respect of 754 births attended by midwives, a proportion of 2·3 per cent., almost identical with that in 1909. Of 41 cases of puerperal fever notified in the county 15 occurred in the practice of midwives. The report refers to the sanitary regulation of tents, vans, and other moveable dwellings, which frequently give rise to difficulty, as while the local authority can enforce its by-laws (for example, as to obtaining a sufficient supply of water) on the occupant, it cannot do so on the owner of land habitually let as a camping-ground. The principal facts of sanitary administration in the 33 sanitary districts (29 urban and 4 rural) of which Middlesex is now composed are set out in a very instructive manner. Dr. Young's next report should have the further interest of presenting statistical data regarding the several districts which are based on the recent Census enumeration. The population of the administrative county has increased from 792,476 in 1901 to 1,126,694 in 1911.

Metropolitan Borough of Islington.—Islington, one of the largest of the London boroughs, has shared in the diminution of population which has taken place in the more central parts of the metropolis. It had 327,423 inhabitants this year, a decrease of 7568 on the previous Census. Although there is evidence that many dwellings are unoccupied, the density of population is high—117 per acre. There has also been a notable increase in pauperism, an average of 10,476 people per week being in receipt of relief during 1910. The changes in the character of the population, and the possibility that, owing to the system of relief in Islington or to other causes, there is a considerable immigration of persons of the poorest class, give special importance to the efforts of the medical officer of health to deal with unsatisfactory housing, food-supply, and like matters. Several dwellings were closed as unhealthy under the Housing and Town Planning Act during the year, and there is room for a vigorous policy in this respect. Mr. A. E. Harris presses for the appointment of health visitors, not only for the prevention of infant mortality, but in order to deal with individual cases of phthisis notified under the Local Government Board orders. In the absence of visiting these orders merely throw on the health department a mass of comparatively useless clerical work. The report gives details of inspection of kitchens of restaurants, coffee and dining rooms, and similar places, a large number of which were found to be in an extremely unsatisfactory condition as regards cleanliness, lighting, and ventilation. It is an anomaly that while refuse is removed from the large hotels and restaurants, when desired, free of extra charge, there is only a weekly clearance from small coffee-shops and eating-houses; any extra removal is charged for, and the occupiers prefer to keep their bins crowded to their utmost capacity. These small shops are in the poorest parts of the borough, and the accumulated refuse gives rise to various nuisances and breeds large numbers of flies. In places where ice-creams are made the most unsatisfactory condition which is now found on inspection is the want of suitable storage for the materials used, which at present are kept anywhere, and have sometimes been found in the bedrooms of the makers. The inspectors have secured a marked improvement in the cleanliness of milk measures, but Mr. Harris finds that the lids of milk-cans are sometimes in a very uncleanly state. He considers also that the time has come for requiring that foodstuffs, particularly those which are eaten in a raw state, should no longer be sold in open-fronted shops. Mr. Harris has continued the energetic administration of the Sale of Food and Drugs Acts for which Islington has for many years been conspicuous, but he again draws attention to the way in which the clumsy and antiquated provisions of these Acts make it impossible to deal with flagrant cases of misdescription and adulteration, particularly of foods and drinks sold in poor neighbourhoods; and his report contains some striking illustrations of the need for official definitions of foods in this country, comparable to those in force in British colonies and the United States.

County Borough of St. Helens.—Under the St. Helens Corporation Act, 1898, the town council can require any privy ashpit in the borough to be converted and adapted to the water-closet system, whether it give rise to nuisance or not, and any tub or pail-closet to be converted into a water-closet if it creates a nuisance. If the latter do not create nuisance the conversion can still be enforced by the municipality if it is prepared to contribute half the cost. Notwithstanding these provisions a great deal remains to be done in this town to improve methods of excrement and refuse disposal. There remain as many as 2820 privy middens, most of which are in the thickly inhabited portions of the town, and 6382 pail closets, which are still almost as numerous as the water-closets in the borough. The retention of privy-ashpits and the defects in the pail system no doubt contribute to the maintenance of sporadic enteric fever. This disease occurred in 71 houses in 1910 and is understood to be still more prevalent during the present year. Dr. J. J. Buchan gives figures which show that it would be practicable to continue conversion at a much greater rate than hitherto without materially adding to the local rates. In August, 1910, an outbreak of poisoning attributed to canned meat was investigated. A large tin of a well-known brand of corned beef had been opened by a grocer and sold by the slice on the same or the next day to 11 customers, through whom the meat was eaten by 33 persons. All but one of these became ill within a very short time of eating the meat; the shortest period of incubation was two hours and the longest ten hours; the majority were affected in about four hours. The symptoms consisted chiefly of vomiting and severe diarrhœa, continued from six to 24 hours after the onset; the illness was accompanied by a great amount of depression, which left the persons affected ill for some days. Bacteriological examination failed to show any evidence of the presence of bacilli of the Gaertner group or B. botulinus, and the general history of the outbreak made it probable that it was due to bacterial toxin rather than to living bacteria. Dr. Buchan considers that much good has been done by the systematic visiting by a trained nurse of practically all births notified under the Notification of Births Act. In this way the percentage of infants who are breast-fed has increased, and on the present method of reckoning amounted to 98 in 1910. An inquiry into 2170 cases showed that only 6·6 per cent. of the infants originally reckoned as breast-fed at birth were weaned before they were six months old. In St. Helens the town council pay a small fee—6*d.* per birth—to medical practitioners and midwives notifying under the Act.

County Borough of Blackpool.—Dr. E. W. Rees-Jones's report contains several matters of interest. The birth-rate of Blackpool, which was 27·74 in 1898, has now fallen to 16·7; the death-rate for 1910 was as low as 12·47. The Census population, 58,378, on April 1st last is, of course, greatly below the normal population of this popular seaside resort during a large part of the year. Blackpool is so dependent on visitors that there is special need for precautions against the spread of infectious disease through lodging-houses, and Dr. Rees-Jones strongly urges, in regard to phthisis, that the sanitary authority should have compulsory powers to disinfect thoroughly all premises which have been occupied by consumptive persons, and that it should be a penal offence to allow such premises to be occupied by others without previous disinfection. Measles has been a notifiable disease in Blackpool for over 20 years; in 1910 the notifications were 660, and the deaths 4 only. Dr. Rees-Jones considers it doubtful whether the administrative measures based on notification have had much effect in reducing the prevalence of the disease, but believes that a marked effect has been produced by them on the case mortality. The cost of the infectious diseases hospital to the rates, including interest,

sinking fund, renewal expenses, and cost of disinfection, averaged £2 5*s.* per patient per week; cost of maintenance in food averaged for the year 4*s.* 11*d.* per head per week. Special attention is given by the sanitary authority to basement dwellings; 89 families living in basement rooms have only one room for the whole of the family. In Blackpool the administration of the Shop Hours Acts and Employment of Children Act is carried out in the department of the medical officer of health.

REPORTS OF SCHOOL MEDICAL OFFICERS.

County Borough of Stockport.—Mr. H. E. Corbin, in presenting the report of the school medical officer (Dr. M. Gertrude Edis), is able to state that the amount of treatment obtained as a result of inspection is very satisfactory. Of the 5102 children inspected out of a school population of 17,906, 68·6 per cent. were found to have one or more defects, and 15·6 per cent. parents attended. As in most other places, great difficulty exists in dealing with ringworm and verminous conditions, and less improvement is reported in these conditions than in other defects, the actual percentage of verminous heads found being increased over last year's figure. It is suggested that the cloakrooms help in spreading the condition. In connexion with anæmia (379 cases) it is suggested that the badly ventilated classrooms are a contributory factor. There were 32 mentally defective children, and 215 "backward" cases, of whom 60 per cent. were accounted for by some physical defect, and 40 per cent. showed no obvious cause. 126 cases had deformities. Difficulty in the treatment of ringworm arose partly because of the refusal of the infirmary board to treat school cases, and led to the issue of a circular letter to all practitioners in the town and to the passing of special administrative measures. The success of these measures is not stated. A detailed report on the sanitary circumstances of schools reveals a number of grave defects; in four schools privy-middens exist, many schools are dirty, cloakroom accommodation is bad, and in some schools the heating arrangements are very poor, in one department so much so that frequent exercise has had to be added to overcoats worn in the class-room to maintain the temperature. This last school was a non-provided institution.

County of Ayr.—Dr. C. R. Macdonald's report takes us up to July, 1911, and comprises reports for the Northern, Kilmarnock, and Ayr and Carrick districts, and for the schools in the Burgh of Ayr. In the Northern district the number of "entrants" and "leavers" examined was 3537, the number found defective being 2309; out of 280 special cases presented by the teachers, in 273 the attention of parents was drawn to a remediable condition. It is not a little remarkable that for all these children only 122 parents attended, and it would be extremely interesting to have a light thrown on the social school conditions, if any, which go to produce this effect. A large proportion of the defects found among the routine cases were in regard to cleanliness, and when these are subtracted only 997 cases remain, of which 360 were "bad" dental caries, 163 defective vision, and 175 deafness. There were 36 cases of tuberculosis and 18 of valvular disease of the heart. It is curious to note that only one case of enuresis is recorded. The figures quoted are fairly typical of many other districts, and it is a matter for consideration whether an economy in energy might not be effected by a method of examination other than that of mechanical routine. It is also a matter of interest to consider how long an investigation of some kind into the digestive system can be left out of school examinations. Possibly some light might be thrown by such an investigation on "malnutrition." The medical officer of the Northern district reports on the privy-midden, still existing in some schools, as "an absolute abomination." There is no excuse of any kind for the persistence of these insanitary antiquities. Dr. B. C. Stevens reports for the Kilmarnock district that more parents attended than last year, 3654 routine cases were seen and 365 special cases, and with these children 364 parents came to the inspection. One in nine of these children suffered from malnutrition, as compared with the figure of 1 in 18 for the Northern district, and 1 in 23 for the district of Ayr and Carrick. As the three districts concerned are only divided for administrative purposes, and the report does not note any special differences between them, it is to be presumed that these wide divergences are due to differences of standard in estimating nutrition.

Hampshire County Council.—Dr. Robert A. Lyster's report deals with the three districts into which the county is divided for school purposes, containing 42 urban and 308 rural schools, with 13,753 and 33,009 children in average attendance respectively. During the year 1185 visits were made to schools, of which 458 were routine visits, and 48,895 examinations of children made, children known to be defective being examined on several occasions. 7885 routine cases were inspected and 41,010 special examinations made, this figure including re-examinations. The method adopted provides for the registering not only of the usual observations, but also, among other matters, gives the number of rooms in the homes of children and number occupied, and the occupation of the parents. The coöperation of the teachers is greatly encouraged, and went as far in one school as the actual rehearsing of a medical inspection in order to secure smoothness of working. It is interesting to note on these figures that Dr. Lyster classes 1·06 per cent. "entrants" (5 years) as suffering from bad nutrition and 0·89 per cent. "leavers" (13 years); this is a diminution on the figures of the previous year, whereas dirtiness has increased. In regard to clothing Dr. Lyster notes the prevalence of over-clothing, and the fact that this is often confined to the chest and abdomen, the legs being left bare. This is probably a universal experience with certain sections of the population, and may well account for the prevalence of bronchitis and broncho-pneumonia among children whose parents are of the poorer class. Considerable attention is directed to the condition of clothing, as also of footgear, and a strong plea is put in for the "economical and hygienic" clogs. The difference between the North where clogs are habitually worn and the South where they are not appears to be a matter of social custom only. Medical inspection will prove a powerful weapon indeed if it can produce not only fashions which will tend to eradicate pediculi, but also fashions in footwear. The figures for attendance of parents at examination are not given, but it is stated that few attend, partly owing to the long distances to be travelled. Despite this over 54 per cent. obtain treatment for the defects pointed out at inspection, and apart from dental defects 64·4 per cent. are treated. A special investigation was made in the Farebam Poor-law area to discover why children needing treatment had not obtained it. Inquiries were conducted concerning children living in 282 homes, and the fact emerged that more than half these cases had a total income (excluding rent) of not more than 10*s.* to 20*s.* a week, while 10 per cent. of the cases were below 10*s.* a week. A tabulation of special work done in connexion with schools by teacher and others is given, and is interesting as affording a measure of the amount of individual initiative and goodwill available for school purposes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns, having an estimated population of 16,157,797 persons in the middle of this year, 7900 births and 4056 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had been 14·4, 13·3, and 13·5 in the three preceding weeks, declined to 13·1 per 1000 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these towns averaged 14·1, or 0·1 per 1000 above that recorded in London during the same period. The death rates in the 77 towns last week ranged from 5·0 in Walthamstow, 5·1 in King's Norton, 5·7 in Willesden, and 6·2 in Reading, to 19·0 in Swansea, 20·0 in Stockton-on-Tees, 20·7 in Sunderland, and 21·6 in Bootle. The 4056 deaths from all causes in the 77 towns were 126 fewer than the number returned in the previous week, and included 279 which were referred to the principal epidemic diseases, against numbers decreasing from 2900 to 301 in the 11 preceding weeks. Of these 279 deaths, 113 resulted from infantile diarrhœa, 55 from diphtheria, 37 from measles, 26 from scarlet fever, 24 from enteric fever, and 24 from whooping-cough, but not one from small-pox. The mean annual death-rate from these epidemic diseases

last week was equal to 0·9 per 1000, against 1·1 and 1·0 in the two preceding weeks. The deaths of infants under 2 years of age attributed to diarrhœa, which had steadily decreased from 2714 to 128 in the 11 preceding weeks, further declined to 113 last week, and included 39 in London and its suburban districts, 10 in Manchester, 7 in Liverpool, 6 in Birmingham, and 4 in Sheffield. The deaths referred to diphtheria, which had been 60, 46, and 56 in the three preceding weeks, were 55 last week; 15 deaths occurred in London, 4 in Stoke-on-Trent, 4 in Liverpool, 3 in Portsmouth, and 3 in Southampton. The 37 fatal cases of measles were 1 in excess of the number in the preceding week, and included 11 in London and 4 in Tottenham. The deaths attributed to scarlet fever, which had steadily increased from 10 to 30 in the four preceding weeks, fell last week to 26, and of these 7 were registered in London, 4 in Liverpool, 3 in Stoke-on-Trent, and 2 in Birmingham. The deaths assigned to enteric fever, which had been 48, 28, and 35 in the three preceding weeks, declined last week to 24, of which 3 were recorded in Birmingham, and 2 each in London, Blackburn, York, and Hull. The 24 fatal cases of whooping-cough were equal to the average in the three preceding weeks, and included 8 in London, 3 in St. Helens, and 2 in Coventry. The number of scarlet fever patients in the Metropolitan Asylums and in the London Fever Hospital, which had steadily increased from 1327 to 2189 in the 10 preceding weeks, had further advanced to 2203 on Saturday last; 292 new cases of this disease were admitted to these hospitals during the week, against 344, 297, and 269 in the three previous weeks. These hospitals also contained on Saturday last 1249 cases of diphtheria, 174 of whooping-cough, 130 of enteric fever, and 83 of measles, but not one of small-pox. The 1108 deaths from all causes in London last week were 32 fewer than the number in the previous week, and included 196 which were referred to diseases of the respiratory system, against 228, 210, and 170 in the three preceding weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 158 and 144 in the two preceding weeks, further declined to 136 last week, and 325 inquest cases were registered. The causes of 39, or 1·0 per cent., of the deaths registered in the 77 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified last week in Manchester, Leeds, Bristol, West Ham, Bradford, Nottingham, Stoke-on-Trent, Portsmouth, and in 51 other smaller towns. The 39 uncertified causes of death in the week under notice included 8 in Birmingham, 4 in Bootle, 4 in Warrington, 4 in South Shields, and 3 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,291 persons in the middle of this year, 798 births and 533 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had been 16·7 and 16·4 per 1000 in the two preceding weeks, was equal to 16·3 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·1 per 1000, and was 2·0 per 1000 above the mean rate during the same period in the 77 large English towns. The annual death-rates in the Scotch towns last week ranged from 12·3 and 14·5 in Paisley and Dundee to 18·1 in Edinburgh and 18·9 in Perth. The 533 deaths from all causes were 5 fewer than the number in the previous week, and included 48 which were referred to the principal epidemic diseases, against 52 and 47 in the two preceding weeks; of these 48 deaths, 14 resulted from diphtheria, 13 from measles, 9 from whooping-cough, 9 from diarrhœa, 2 from scarlet fever, 1 from enteric fever, but but not one from small-pox. The mean annual death-rate from these epidemic diseases in the eight towns last week was equal to 1·5 per 1000, and was 0·6 per 1000 above the mean rate from the same diseases in the 77 large English towns. The deaths attributed to diphtheria, which had been 5, 8, and 11 in the three preceding weeks, further rose last week to 14; 8 deaths were recorded in Glasgow, 2 in Edinburgh, and 2 in Dundee. The deaths assigned to measles, which had steadily increased from 1 to 15 in the six preceding weeks, slightly declined to 13 last week, and included 7 in Aberdeen and 4 in Glasgow. The fatal cases of whooping-cough, which had been 5, 4, and 5 in the three previous weeks, rose to 9 last week, and of these 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to diarrhœal diseases, which had decreased from 41 to 12 in the four preceding weeks, further declined last week to 9, all but one of which were of infants under two years of age; 3 deaths were registered in Glasgow and 2 in Paisley. The deaths attributed to scarlet fever, which had decreased from 8 to 4 in the four preceding weeks, further declined to 2 last week, and were recorded in Dundee and Leith respectively. The fatal case of enteric fever was registered in Leith. The deaths referred to diseases of the respiratory system, which had increased from 78 to 116 in the three previous weeks, declined to 108 in the week under notice, but were 43 above the number in the corresponding week of last year. Of the 533 deaths from all causes in the Scotch towns last week, 155, or 29 per cent., were recorded in public institutions, and 21 deaths were attributed to various forms of violence. The causes of 15, or 2·8 per cent., of the deaths in the eight towns last week were not certified; in the 77 large English towns the proportion of uncertified causes did not exceed 1·0 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,149,495 persons in the middle of this year, 631 births and 388 deaths were registered during the week ending Nov. 11th. The annual rate of mortality in these towns, which had declined from 19·6 to 17·1 in the five preceding weeks, rose to 17·6 per 1000 in the week under notice. During the first six weeks of the current quarter the mean annual death-rate in these Irish towns averaged 18·2 per 1000; in the 77 English towns the mean annual death-rate during the same period did not exceed 14·1 per 1000, while in the eight Scotch towns it was equal to 16·1. The annual death-rate last week was equal to 22·1 in Dublin (against 12·8 in London), 15·7 in Belfast, 19·7 in Cork, 15·3 in Londonderry, 8·1 in Limerick, and 15·2 in Waterford; while in the 16 smallest of these Irish towns the annual death-rate did not exceed 13·6 per 1000. The 388 deaths from all causes were 10 in excess of the number in the previous week, and included 33 which were referred to the principal epidemic diseases, against numbers decreasing from 134 to 40 in the eight preceding weeks; of these 33 deaths, 10 resulted from diarrhœal diseases, 9 from measles, 6 from diphtheria, 5 from scarlet fever, 2 from whooping-cough, and 1 from enteric fever, but not one from small-pox. These 33 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·5 per 1000; in the 77 English towns the mean death-rate from these diseases did not exceed 0·9 per 1000, while in the eight Scotch towns it was equal to 1·5. The deaths attributed to diarrhœal diseases, which had steadily decreased from 121 to 24 in the eight previous weeks, further declined last week to 10, all but one of which were of infants under two years of age; 5 deaths were recorded in Dublin. The deaths referred to measles, which had increased from 1 to 6 in the four preceding weeks, further rose to 9 last week, and comprised 6 in Dublin, 2 in Newtownards, and 1 in Cork. The six fatal cases of diphtheria were 4 in excess of the average in the four preceding weeks, and comprised 2 each in Dublin, Belfast, and Cork. Of the 5 deaths assigned to scarlet fever, 3 were recorded in Dublin and 2 in Belfast. The 2 fatal cases of whooping-cough and that from enteric fever also occurred in Belfast. The deaths referred to diseases of the respiratory system, which had been 57 and 77 in the two preceding weeks, slightly fell to 75 in the week under notice. Of the 388 deaths from all causes in the Irish towns last week, 117, or 30 per cent., were recorded in public institutions, and 5 were attributed to different forms of violence. The causes of 12, or 3·1 per cent., of the deaths registered in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes in the week under notice did not exceed 1·0 per cent. in the 77 large English towns, and was equal to 2·8 per cent. in the eight Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeon: F. A Capps to Haulbowline Hospital. Staff Surgeons: H. Huskinson to the *Boadicea;* and E. R. L. Thomas to the *Victory*, additional, for disposal. Surgeon and Agent, Ryde, Isle of Wight: J. W. Pridmore.

In accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Shirley Hall Birt has been allowed to withdraw from His Majesty's Naval Service with a gratuity (dated Sept. 18th, 1911).

ROYAL ARMY MEDICAL CORPS.

Major Albert Pearse retires on retired pay (dated Nov. 15th, 1911).

Lieutenant Benjamin Biggar, from the seconded list, is restored to the establishment (dated Oct. 1st, 1911).

Colonel W. G. A. Bedford, C.M.G., principal medical officer at Hong-Kong, has been selected for appointment as Principal Medical Officer of the London District in succession to Colonel A. Peterkin. Lieutenant-Colonel A. F. Russell, C.M.G., has been appointed Principal Medical Officer in Egypt in succession to Colonel T. M. Corker, who is appointed Principal Medical Officer of the Eighth (Lucknow) Division of the Northern Army in India. Lieutenant-Colonel W. W. Pike, D.S.O., senior medical officer at Cairo, has been selected for appointment as Principal Medical Officer of the Bombay Brigade, vice Colonel R. H. Forman, retired. Lieutenant-Colonel F. H. Treherne has embarked for India to take up the appointment of Principal Medical Officer of the Bangalore and Southern Brigades, vice Colonel H. J. R. Moberly, who has retired. Lieutenant-Colonel H. J. Barratt, senior medical officer of the Straits Settlements, has been appointed Principal Medical Officer of the Allahabad Brigade, relieving Colonel L. E. Anderson, transferred as Principal Medical Officer of the Bareilly, Gharwal, and Dehra Dun Brigades. Lieutenant-Colonel W. H. Starr has taken up charge of the Military Hospital at Lichfield, vice Lieutenant-Colonel G. W. Brazier-Creagh, C.M.G. Lieutenant-Colonel W. A. Morris, commanding the Station Hospital at Allahabad, has been selected for increased rate of pay under Article 317 of the Royal Warrant. Major S. F. Clark has taken up duty as Medical Inspector of Recruits in the Western Command at Headquarters, Chester, in succession to Major G. S. McLoughlin. Major A. O. B. Wroughton, on return to duty from sick leave, has been posted to the Eastern Command. Major H. C. French, specialist in dermatology and venereal diseases at Malta, has arrived home on leave of absence. Major E. W. P. V. Marriott has arrived home from Gibraltar, tour expired. Major E. M. Morphew, lately commanding the Station Hospital at Ranikhet, has been transferred to the Home Establishment and appointed for duty in the Western Command. An exchange of destinations in India has been approved by the Director-General between Major W. T. Mould and Major L. P. More, who are both under orders to embark during the ensuing trooping season. Major J. W. Leake has taken up duty at Sierra Leone. Major G. S. Crawford has been appointed Recruiting Medical Officer at Dublin in succession to Major G. W. Tate, appointed Medical Inspector of Recruits. Major E. P. Sewell, lately serving at Belfast, has taken up duty at Ceylon as Specialist Sanitary Officer. Major G. St. C. Thom, specialist in otology and laryngology, has been granted one year's extension of Indian tour of service. Major F. J. W. Porter, D.S.O., in medical charge of effective troops at Cosham, has been placed under orders for duty with the Northern Army in India. Major R. C. Lewis, on the closing of Carnarvon Camp, has joined for duty at Pembroke Dock. Major H. G. F. Stallard, on relief by Brevet-Colonel R. S. F. Henderson, K.H.P., has been transferred from Army Headquarters, Simla, to Cherat. Major N. Marder, from Cosham, has taken up duty at Portland. Major G. Mansfield, in charge of the Military Hospital at Norwich, has been granted ten days' leave. Captain J. J. O'Keefe has been appointed to hold civil medical charge of Roorke, in addition to his military duty, in succession to Captain B. E. M. Newland, I.M.S. An exchange on the roster for service abroad has been approved by the War Office between Captain M. F. Foulds, specialist in advanced operative surgery at Belfast, and Captain A. F. Carlyon, serving at Devonport. The latter will accordingly take up duty at Mauritius during the ensuing trooping season. Captain P. G. Hyde, from Dublin, has arrived in Ceylon for a tour of service. Captain W. F. Tyndale, C.M.G., has taken up duty as Specialist Sanitary Officer at Devonport on transfer from the Irish Command. Captain R. C. Wilmot has joined for duty at Colchester as Specialist in Ophthalmology on transfer from the Southern Command. Captain W. Byam has arrived home on leave of absence from duty with the Egyptian Army. Captain F. E. Rowan-Robinson, at present serving at Norwich, has been granted leave of absence from Dec. 1st to date of embarkation to Bermuda. Captain H. B. Kelly has been appointed to the medical charge of the Military Families Hospital at the Curragh. Captain M. J. Cromie, Captain E. W. Powell, and Captain A. D. O'Carroll have been detailed for duty on board the troopship s.s. *Plassy*, which left Bombay for Southampton on Nov. 9th. Lieutenant H. S. Ranken has taken up duty in the Egyptian Army with the rank of Bimbashi, for appointment under the Government of the British Sudan.

INDIAN MEDICAL SERVICE.

Surgeon-General H. W. Stevenson has received an extension of his leave of absence home from India. The Lieutenant-Governor of the Punjab has appointed Lieutenant-Colonel C. H. James a first-class Civil Surgeon. Lieutenant-Colonel P. Hehir has taken up duty as Officiating Principal Medical Officer of the Burma Division. Lieutenant-Colonel J. Morwood on return from leave has been appointed Civil Surgeon of Shahjahanpur, United Provinces. The services of Major E. L. Ward, superintendent of the Central Jail at Lahore, have been placed temporarily at the disposal of the Coronation Durbar Committee for employment at Delhi. Major D. N. Anderson has embarked for India on the expiration of his leave of absence. Major E. C. G. Maddock has been permitted to extend his leave of absence from India on the recommendation of a medical board for a further period of six weeks. Captain E. A. Walker, Bengal Presidency, has arrived home on leave of absence. The services of Captain S. B. Mehta, plague medical officer at Rohtak, have been placed at the disposal of the Government of India for employment under the Department of Education in the Punjab. Captain W. J. Fraser, officiating civil surgeon at Chanda, has been placed on deputation for a course of training at the X Ray Institute, Dehra Dun. Captain F. W. Sumner, officiating civil surgeon at Shahjahanpur, has taken up duty at Fategarh, United Provinces, relieving Captain E. P. Mackie, who has been appointed Officiating Civil Surgeon at Bijnar. Captain E. J. C. McDonald, officiating civil surgeon at Sibsagar, has been selected for employment as Medical Officer in Charge of the Military Police Force engaged on active service with the Abor Expedition. Captain J. W. McCoy, Bengal Presidency, has received two months' extension of his leave of absence home from India. Captain T. C. Rutherfoord, civil surgeon of Bilaspur, has been appointed to the medical charge of the Raipur District. Captain H. C. Keates has taken up duty as Superintendent of the Jullundur District Jail. On return from leave Captain A. F. Babonall has been transferred from Ambala District to Gurgaon as Plague Medical Officer. Captain W. E. Brierley has embarked for service in India. Captain W. L. Trafford has received permission to extend his leave home from India for a further nine months.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st London (City of London) Field Ambulance, Royal Army Medical Corps: Lieutenant Eardley L. Holland resigns his commission (dated Nov. 11th, 1911).

1st South Midland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be captains (dated Oct. 1st, 1911):—Lieutenant Cyril R. Lunn, Lieutenant William M. Sturrock, and Lieutenant William McCall.

2nd South Midland Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be captains (dated Oct. 1st, 1911):—Lieutenant William A. L. Holland, Lieutenant John H. Hobling, and Lieutenant Alfred A. Hingston.

Attached to Units other than Medical Units.—Lieutenant Frederick W. K. Tough to be captain (dated Oct. 1st, 1911).

For Attachment to Units other than Medical Units.—Thomas Charles Hunter to be Lieutenant (dated Sept. 9th,

1911); Oskar Teichmann to be Lieutenant (dated Sept. 16th, 1911); Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel Charles Henry Gwynn, from the 4th Battalion, The King's (Shropshire Light Infantry), to be Lieutenant-Colonel with the honorary rank of Surgeon-Colonel (dated Nov. 11th, 1911).

The undermentioned officers of the Royal Army Medical Corps to be Adjutants of Schools of Instruction:—Captain Hugh Herbert James Fawcett (dated Oct. 19th, 1911), and Captain Farquhar McLennan, Captain Charles Bramhall, Captain Richard Nason Woodley, Captain Charles Reginald Sylvester-Bradley, Captain Richard Brassey Hole, Captain John Martin Maynard Crawford, Captain Montague Frederick Grant, Captain Henry Horace Andrews Emerson, and Captain Roland Harley Bridges (all dated Nov. 1st, 1911).

Deaths in the Services.

Surgeon-Major-General Robert Wyatt Meadows, A.M.S., at his residence, "Fensalir," Saltash, Cornwall, on Nov. 9th, in his 80th year. He entered the army as assistant-surgeon, joined the 9th Norfolk Regiment at Malta in 1854, and, volunteering for war service, was sent to the Crimea. He was present at the battle of Inkerman, and served throughout the whole of the siege of Sevastopol. At the conclusion of the war he was gazetted to the 68th Regiment and proceeded to Canada; later he went to India and rendered excellent service during the cholera epidemic at Mhow, in Central India, and for which he received the special thanks of the Commander-in-Chief (the late Duke of Cambridge). After 20 years' foreign service he came to England in 1874, and was appointed medical officer in charge of Bull Point, Devonport. In 1878 he went to Bengal, being attached to the 60th Rifles, and served during the Afghan war of 1879–80. Later he was selected to be principal medical officer of the 3rd Division, and took part in the march from Kandahar to Cabul, under Sir D. Stewart, and was at the battles of Kheyl and Urzoo, as well as at some minor engagements. At the close of the war he was promoted deputy-surgeon-general to the Mhow Command. He returned to England later and was appointed principal medical officer of the old Western Command at Devonport. He was afterwards made principal medical officer at Gibraltar, and was promoted surgeon-major-general. In 1892 he retired from the service and took up his residence at Saltash.

Close of a Remarkable Career.

News comes from Calcutta of the death of Surgeon-Lieutenant-Colonel K. P. Gupta, I.M.S., at the age of 68. In spite of extreme poverty in early life he had a distinguished student career at the University of Calcutta, and not only supported himself out of scholarships but managed to contribute to the maintenance of his widowed mother in their native village of Bengal. He passed the B.A. examination with distinction in 1865 and obtained first place in the M.A. examination a year later. After passing the final M.B. examination in the first division in 1868 he proceeded to Scotland and qualified as L.R.C.P. & S. within a year. In 1879 he obtained the F.R.C.S. Edin. and in 1884 the D.P.H. of Cambridge. He passed high into the Indian Medical Service and remained in that service for 29 years. He was Deputy Sanitary Commissioner of Bengal for a considerable period and rendered valuable service to the Government. Lieutenant-Colonel Gupta was much beloved by his fellow countrymen and was an active benefactor to his native village.

The Shortage in the Medical Services.

In answer to Mr. Bennett Goldney in the House of Commons on Nov. 13th, Mr. Macnamara said that the shortage of medical officers in the Royal Navy Medical Service at the present time was practically the same as it was 12 months ago—20 had entered and 22 had gone owing to retirements or deaths. The shortage was 60 of all ranks. In reply to a similar question with regard to the Royal Army Medical Corps of all ranks in the Regular Army, in the Reserve, and in the Territorial Force, Mr. Tennant said: The present shortage was as follows:—Regulars: officers, 22; other ranks, 208. Reserves: officers, *nil*; other ranks, 3174. Territorial Force: officers, 283; other ranks, 1759. There is no definite establishment of officers of the Special Reserve, but the present strength amounted to 114. At the last three examinations for commissions the number of candidates qualified exceeded the number of vacancies. For the examination to be held next January for not less than 20 vacancies three candidates had already entered, but the list would not be closed until Jan. 15th.

Indian Medical Service Examination.

An examination for not less than 12 commissions in the Indian Medical Service will be held in London on Monday, Jan. 22nd, 1912, and the five following days. Particulars and the necessary forms for application can be obtained from the Military Secretary, India Office, London, S.W.

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—There is no doubt that a large majority of the profession is strongly opposed to the suggestion that the medical benefits under the Insurance Bill—soon to become the Insurance Act—shall be dispensed by "contract" with the doctors at a uniform and continuous *per capita* rate. Among those who assent to this contract system are many who do so only because they regard it as inevitable, or as the only practicable system, and many others who think that all objections to the system pass away if the scale of payment is adequate. There are very few of us who hold that it is in principle as well as in practice the right system of payment of doctors. The simplest and best way to test one's conviction of its merits is to answer the question whether it is adapted for all classes of the community, the rich as well as the poor. The initiation of the system was due to the desire of medical men to extend *their charity* to their poorer neighbours. Is a system founded on voluntary charity adapted for compulsory State assurance? Surely we have never had a more extraordinary proposal to fill old wine-skins with new wine than is this!

You have already, in June last, extended to me the courtesy of your columns to urge my professional brethren to refuse the position offered them under the Insurance Bill, which is, in a word, to underwrite the "medical benefit" of that Bill. I will not repeat what I then said, but will only add that the way in which "free doctoring" has been spoken of by the Chancellor of the Exchequer as one of the great attractions of the Bill to the assured is the clearest proof of the danger of this Bill to the medical profession. Will this "bribe" of "free doctoring" and "no doctors' bills" be paid by the State or wrung from the impoverished pockets of the general practitioner?

The contract system is not essential or inevitable to a scheme of sickness insurance. There are at least three other possible methods; two of these can be dismissed at once—the system of State doctors to attend only the insured and the system under which the State or the Local Insurance Committees would undertake to pay the bills for medical attendance upon the insured. These plans have no advocates, and we need not discuss their drawbacks. The objections which were urged to the latter system by your correspondent, Dr. J. P. Walker, throw a lurid light upon the difficulties of carrying out medical attendance upon insured persons.

The real practicable alternative to the "contract system" is to include the cost of medical benefit in the weekly insurance money and let the insured man use it in the payment of his doctor for services rendered in exactly the same way as he will use the rest of the money in the payment for his other necessaries. It is evident that if the sum paid to the profession under a scheme of "contract" is "adequate" it must equal the total sums that should be paid by the sick members of the insured community under the ordinary method of payment for work done. An "adequate" *per capita* rate must at least equal the "adequate" remuneration of the doctors for the work they do. The sum of money, therefore, that would be required for "payment for work done" would not exceed that paid under an "adequate" contract system. But there would be this difference: the money would be paid directly to those who earn it, and at the time of earning it, and there would be that close and direct association between work and remuneration that sweetens both. The "contract system" lends itself to abuses that "payment for work done" does not. The latter would

prevent—unreasonable demands upon the doctor, and valetudinarianism or malingering. When each visit of the doctor has to be paid for in hard cash the poor man will not be tempted to make undue calls upon his doctor. Undoubtedly one of the chief difficulties in the working of any system of sickness insurance is that of valetudinarianism or malingering. It is openly stated that since the Workmen's Compensation Act came into force injuries have been more slowly recovered from than heretofore. We all have daily evidences of the potent influence of mind over body, and it does not involve any charge of moral obliquity to maintain that the need to earn one's living is a healthy stimulus to convalescence, and that when this stimulus is removed convalescence is apt to be prolonged. If the Insurance Act is not to be an intolerable burden to the State, and a blighting influence upon the wage-earning population, it must leave the sick man with a very direct interest in getting well as quickly as ever he can; and to force him to pay for his "medical benefit" out of his insurance money will be a simple and efficient means of applying the pressure which will be the necessary stimulus.

Among other advantages of the "payment for work done" system are these: There is no need for a wage-limit, as the scale of fees would vary, as at present, in accordance with the financial ability of the patient; the question of the control of doctors by Local Insurance Committees or by societies and clubs would not arise; the payment for consultations, operations, and the services of specialists of all kinds, as well as the payment for hospital treatment, can be arranged quite easily and along the same lines as the payment of the regular doctor.

Were this system to be adopted the doctors would have to contribute to its working by giving a certificate to enable the sick man to receive each week's insurance money, such certificate stating that the insured man was duly carrying out his doctor's advice and was still unfit for work, and it might include a statement of the number of medical visits paid during the week and the amount of the fees that had been paid to the doctor for his attendance. The doctors would also have to accept small cash fees and to insist on their payment at the time.

I must not encroach further upon your valuable space, and in conclusion would only urge all my professional brethren to realise that the "contract system" is not indispensable to the insurance scheme, that the ordinary mode of conducting medical practice—payment of fees for work done—is easily adapted to the insurance scheme, and I cannot help thinking that its adoption is essential to the honourable conduct of the profession of medicine and to the safeguarding of the industrial community from evils inherent in "contract practice."

I am, Sir, yours faithfully,

Nov. 14th, 1911. ALFRED PEARCE GOULD.

To the Editor of THE LANCET.

SIR,—In the letter which you kindly published on Nov. 4th I put forward briefly my reasons for believing that a *per capita* system of payment will, if the premium is adequate, be advantageous to medical men. If it is true to say "that silence gives consent," then it is fair to conclude that my arguments are either unanswerable, inasmuch as no opponent has come forward to refute them, or that no opponent read my letter. I should like, with your permission, to add a few further considerations in support of my contention.

In my letter of Nov. 4th I referred to the fact that a considerable percentage of medical men is now, and has been for generations, working on the contract system in which payment is by salary. Surely everything that can be said against the *per capita* system applies to this system of payment by salary—that is to say, it is "immoral, dishonest, inherently and ineradically bad and inquisitorial." One must suppose that the writers who have flung these epithets understand what they meant. Is it too much to ask them to tell us on what grounds, in what sense, aspect, or respect, they consider those qualities applicable to the *per capita* system? I have nowhere yet seen any clear statement of the case against contract practice, and if one of those who oppose it will kindly put forward his points without relying too much upon adjectives of vague or undefinable meaning I for one should be greatly enlightened. At present I know of no valid objection to the *per capita* system when worked on an adequate premium. If the premium is inadequate no abuse of the system can be too strong. If the premium is adequate—and of course "adequacy" is a word of elastic meaning—it has the strange property of denoting one thing for a "society member," sound and well on joining, and another thing for a mere "Post Office" individual. I maintain that contract practice is more lucrative than private practice. It seems to me that it is the size of the premium that decides the question of morality or immorality. A premium of 3*s*. 6*d*., or, indeed, anything under the Post Office rate, is, and would be, immoral, and the higher the rate mounts so is immorality gradually shed until we reach the position of the doctor who is paid a yearly fee of £1000 a year for "looking after" his millionaire—work or no work—and we have arrived at what can only be described as a condition of perfect holiness and bliss. The writer who asks, "who but a lunatic could expect a doctor to give attendance and medicine for a year for the price of a pair of gloves or a dozen collars?" is evidently under the impression that all insured persons are and will be ill all the time; he apparently thinks that "*per capita*" means "per sick person" instead of per "insured person." It is obvious he did not read my letter of Nov. 4th in which it was shown that the total receipts in my practice from contract work were equal to the whole receipts from a *larger* number of private *clients* (not patients mind).

I should like to say a word or two in supplement of my remarks, previously published, on the system of "payment by fee," or, as some express it, for "work done," terms which mean generally of course "visit" or "consultation." Supporters of this system appear to be under the impression that there is something definite, precise, something even moral and blessed, in this phrase "work done." Those who contend for payment for "work done" under the Act intend, I presume, that there should be paid us a fixed fee for every "visit." Now what could be more indefinite than this thing "visit"? Does it in any way whatever show value of service rendered? Is there any real connexion between service rendered and fee received? Is there, can there be, any standard of value in this system of payment? Compare a visit four miles away on a bleak evening in January to one in June, or attendance on an anxious case to a call on a trivial one. The fee in each instance is the same! It is obvious when we come to think of it that the relation of fee to "work done" varies within the widest limits. One really "contracts" to "see" patients at so much a visit no matter what the case, no matter what the weather, no matter what time is taken up in earning the fee. I maintain that in its essence private practice is contract work—we "see" patients at so much per "visit" or "consultation." Is it customary to increase the fee if the "visit" is prolonged, involving extra skill or care or anxiety? or to reduce the fee if the conditions of the visit are exactly opposite?

Thus the value of the service rendered has no limit in its variation to the fixed fee. In the same way one can see that though the fee is in some occult way supposed to bear relation to the income, or rather rent of the patient, the relation is anything but regular—so irregular, in fact, that it is foolish to call it "relation" at all. A labourer pays a fee of 2*s*. 6*d*. a visit (the amount of his day's pay) and a person with a hundred times the income pays, we will say, 10*s*. 6*d*. Such a system is indeed farcical in its inequality, its injustice. Perhaps one could say that if there is anyone in the profession who can claim that he works on a system of "payment for work done" it is the surgeon. Fifty guineas, we will suppose, is his fee for an operation for appendicitis. Are any two of his cases alike? I remember a surgeon being called in to remove an ovary which was supposed to be cystic; it was ascertained beforehand that his fee would be 100 guineas. The ovary was found to be cancerous and irremoveable, but there was no offer on his part to reduce the fee. A fee is a fee! I think it is obvious, then, that my contention is fair and cogent, that under our present system of "payment by fee" or for "work done" there is a complete absence of uniformity; that the relation of service rendered to fee received is a value that varies indefinitely. There is no science in the system, to say the least of it.

Now under the *per capita* system the relation—of visit to fee—is absolutely scientific, and in a series of years would be invariable, or nearly so. We can foretell how many births there will be during the year in the whole community, how many deaths, how many cases of illness, how many

accidents. In a district or a corporation area these calculations are also available. I do not say, of course, that I can foretell how many visits I shall have to pay in the next month, but if I took the trouble to count up visits paid in the corresponding months of the last ten years I could get near an accurate estimate. On a *per capita* system, one may say, then, that one will be paid a sum known beforehand (practically a salary) for attending a mathematically calculated and nearly certain number of visits next month. And one has only to do a little sum in arithmetic to find out, if he likes to know, how much he will be paid for every visit he is going to pay next month! This sum or salary is fixed, but the "fee" per visit will vary (if the period for which the calculations have been made is long enough, say 10 years) only with the premium per person insured.

If the premium is, let us say, 8*s.* per head, one will find that for every visit he has paid to his contract *patients* the fee will work out at 2*s.* 6*d.* Next year might be a bad influenza year, and the result might be a paltry 2*s.* 5½*d.*; year after, and so on, there would be slight fluctuations, but over a decennial period we should find an average, probably, of 2·569 shillings as the actual money received for every visit paid during any year. Though the rate is thus found to be slightly wobbly, the same cannot be said of the total sum or salary received. This has been steady, regular, punctually paid without any baneful accompaniment of ledger, day-book, cash book, bill, receipts, letters, bad debts, and other paraphernalia inseparable from a practice worked on a system of "payment for work done."

In my early days I held a small practice in which there was one small club. My monthly receipts were most uncertain, most inconveniently variable, and it required great carefulness to keep our household finances anything like straight. I felt this inconvenience all the more as I had left a salaried post. It was a friend of mine, similarly engaged in country practice, who first convinced me of the advantages of a surgery club. He pointed out the absurdity of sending a bill to a labourer; that the labourer could easily pay 6*s.* a year to the surgery club, and that with bad debts and other considerations I should find his plan more lucrative to myself and better for my working-class patients. Since then I have done everything I can to encourage this class of "client" to "insure for doctors' attendance," and after 20 years' experience of this system I am more than ever convinced of its advantages to both parties. I should like to extend it to all classes of my *clientèle*, and I should rejoice if all my practice could be worked on a contract, *per capita*, or whatever one calls the plan or system. To be "busy" brings joy to the half of me that is private practitioner and sorrow to the half that is club doctor; if I was all "club doctor" I could smile when other people smile and weep when they weep. To pass three or four days without seeing a single patient—as happens now and again in the summer—only produces a sort of feeling that is neither one thing nor the other; I am half-hearted whether I weep or chortle in my joy. If I was entirely a "private practitioner" I should never be laughing when other people laughed or crying when they cried, so there is no real enjoyment either way. If I was a club doctor pure and simple I could join in at any time whether the folks are laughing or crying.

I am, Sir, yours faithfully,

West Mersea, Colchester, Nov. 13th, 1911. B. HALL, M.B.

To the Editor of THE LANCET.

SIR,—Many of your readers will be surprised at the letter of Dr. B. Hall, a correspondent who is opposed to "any system of payment by fee" for medical services. It would be interesting to know how many of our brethren share the views of this radical reformer, who utterly condemns what has been the almost universal system of remuneration in our profession throughout the world in the past and present, whatever it may be in the future.

It is true a variety of reasons are given for this novel view. The first would seem to be Dr. Hall's own experience of contract, as compared with private, practice. That experience is no doubt interesting, but in the absence of any definite knowledge of the kind of private practice referred to, its cogency is not great in helping to decide on the respective merits of contract and private practice generally. It is not denied there may be forms of private practice worse than contract. The argument as to "worry" involved in the two classes of practice seems to me rather unsafe, if the public good is the chief desideratum. If the doctor takes the same care of, and interest in, his contract patients as he must do in the case of his private, his worry and anxiety might be expected to be rather more, seeing that he must attend a much larger number to gain the same income as in private practice—that is, at any capitation rate he is at all likely to get. If, because he is sure of his income, and that the capitation fees are bound to come in, he gives more or less perfunctory attendance, then his "worry" might be considerably less; but I feel sure Dr. Hall does not mean to suggest this. The argument that as medical work, owing to various agencies, is likely to get much scarcer in the future, we should therefore be glad to take *per capita* fees, is not a little attractive. Does Dr. Hall mean that as payment for work done must necessarily diminish in the future, it is wise of us to look out for payment for work we do not do?

Why the *per capita* system has been denounced as "immoral," I think, we most of us know very well. It does not mean that it is necessarily immoral, but that it far more easily lends itself to the "immoral" than private practice. Dr. Hall speaks of the "dread of making too many visits" in private practice. Is there no fear of making too few in contract practice? It might be a nice point to decide which was the more "immoral," though the patient might suffer more through the latter.

There can be no doubt that good and honourable work can be done under either system, and I think a majority of us would be found to admit that contract practice under certain circumstances is a necessity. But that is quite another thing from approving of the medical proposals in this Bill. They are most degrading to the profession; they revolutionise it in a way that has never been accomplished by the Government of any civilised country. In Germany there is a £2 a week income limit, but there is every reason for believing that the German profession cordially detests its medical insurance system in spite of it.

Unless the medical practitioners of the country stand firm—and the critical time is close at hand—the chains of contract practice will be rivetted on us too strongly to hold out any chance of breaking them. That individual divisions throughout the country will be able to enforce any income limit locally they may desire is to my mind a pleasant dream, and how it can be regarded in any sense as an equitable compromise for the statutory income limit demanded is to me quite incomprehensible. Our only hope is that the profession by a large majority will refuse to accept any appointments under the Bill when it becomes law. We have already practically pledged ourselves to this, for any pretence that the six cardinal points of the British Medical Association have been conceded is a delusion and a mockery.

I am, Sir, yours faithfully,

Nov. 11th, 1911. MAJOR GREENWOOD.

To the Editor of THE LANCET.

SIR,—The time is rapidly approaching when the Insurance Bill will become law, and, in my opinion, it is a matter of very grave doubt whether the interests of the medical profession have yet been safeguarded in the way it has so wholeheartedly demanded.

We placed our case in the hands of the British Medical Association, and we recognise that it has obtained for us two substantial concessions—namely, the administration of medical benefit by the Local Health Committees, and the free choice of doctor by patient. Further, we have been promised adequate representation upon the controlling bodies, and the formation of Local Medical Committees. Nevertheless, the matter which affects us most closely and personally appears to have been seriously neglected. I refer to the amount of remuneration we are to receive for our services.

When the Bill was first introduced we were told by the Chancellor of the Exchequer that financial provision had been made for the payment of a capitation fee of 6*s.*, of which a portion (at first said to be 2*s.*) was to go to the chemists. This figure has not been discussed in Parliament, and there has been no promise to increase the lump sum (£4,200,000) allocated for the purpose. Once the Bill becomes law the capitation grant must remain at 6*s.*

It is understood that the policy of the British Medical Association is to leave the matter of the financial arrangements to be fought out in each locality between the local

medical men and the Local Health Committee when the Act comes into operation. But it will then be too late to get anything altered, and both the Local Health Committee and Medical Committee will be absolutely tied by the terms of the Bill and by the financial provisions made. It is *now* that we should secure both adequate remuneration and reasonable terms of service.

We have supported the demand of the Association for an income limit, and have obtained a partial concession on this point. But surely the question of an income limit is indissolubly bound up with that of a capitation fee. The higher the capitation fee, the higher the income limit we are prepared to accept. Suppose, for example, the capitation fee was 20*s.*, would anyone who has made the smallest analysis of the figures wish to exclude persons with incomes of £500 or even £1000 a year? It is quite certain that we do not get £1 per head per annum from the whole middle class, taking ill and well together. And so with the income of £2 per week for which we have been agitating. It may be to our advantage, but it is pure surmise that the people of this class are paying, at present, on the average, more than 6*s.* per head per annum for medical attendance. By urging their exclusion we may be cutting our own throats. No figures of any value on this matter have been published, and many of the statements as to approaching ruin made in the medical press will not bear the smallest investigation. The mistake, for example, has frequently been made of arguing from the actual number of patients on the books, when what has to borne in mind is that each doctor will have a share of the insured persons, well and ill, and that he will receive the capitation grant from a number of persons who may be years without once consulting him. The sooner we have some authoritative information, so that we may know what to ask for, the better.

As for the income limit, it is an impossible thing to put it into practice. How are we to find out the incomes of 15,000,000 working people? The machinery to do so would cost another 6*s.* per head. A man works for one employer for £2 a week, is out of work for three weeks, and gets a job at 30*s.* His wife earns 12*s.* at a laundry, a boy gets 7*s.* on a milk-round, and a daughter, as much, or more, in a shop. Moreover, these figures are always fluctuating. To make an approximate estimate of such a man's income would necessitate a Somerset House in every village.

My strong impression is that had we held out from the beginning for an increase of the capitation fee to 7*s.* 6*d.*, or a clear 6*s.*, with special fees for operations, night visits, and mileage, we should have done more for ourselves than all the concessions obtained up to the present will do. 7*s.* 6*d.* could, and in all probability would, have been granted by the Chancellor. There would have been a single fight, and we should have won. Now there must be a hundred fights all over the country. We have no solid figures upon which to base our demands, and if we be told later on by the Health Committees that any particular point cannot legally be granted, we will have no ground for objection, seeing that we are now tamely accepting the provisions made.

I am, Sir, yours faithfully,

Enfield, Nov. 14th, 1911. R. HALDANE COOK.

To the Editor of THE LANCET.

SIR,—May I be permitted to express my thorough concurrence with your leading article in to-day's issue of THE LANCET. The fondness of some members of our profession for contract work at capitation fees passes my comprehension. How can a system of strictly limited payments for an unlimited amount of work possibly be satisfactory? Does not every man who can afford it get rid of his contract work as soon as ever he can? The refusal of Parliament to adopt the £2 a week wage limit I regard as a blessing in disguise, as it allows the profession to reconsider the question and to adopt what I believe to be the better plan of payment by fee for work done. Is such a system impossible? I think not. The National Deposit Friendly Society has shown that with proper supervision it is perfectly feasible to attend the working classes at a reasonable scale of fees.

Now, under the Bill there are two classes of the insured—viz., the members of approved societies and the Post Office contributors. The former will be amenable to the rules of their societies and under the constant supervision of their visitors and officials. These I would treat at National Deposit Friendly Society rates. This system would be a powerful inducement to economy and a check on malingering, as it would be to the interest of every member of the societies to restrict sickness and thus diminish the doctor's and chemist's bills. The Post Office contributors would have to be separately considered. They will apparently be quite unorganised and without any system of supervision, consequently I believe it will be inevitable to accept them at a capitation fee, which, considering the class of life they will be, should be a pretty high one. Happily this class will be a diminishing quantity. The Bill offers the insured every inducement to join an approved society, and as young good lives come on they will be absorbed by them.

For both classes a properly thought-out scale of extras should be drawn up, comprising night work, midwifery, vaccinations, lunacy certificates, general anæsthesia, surgical operations, and the treatment of fractures and dislocations based upon the scale allowed by the Poor-law. Such briefly is the scheme I advocate which I have submitted to the authorities of the British Medical Association in greater detail. Its advantages, I submit, are as follows: (1) It provides adequate remuneration for work done, and the rate of payment is about the same as large numbers of the insured have been accustomed to pay as private patients, thus preserving private practice among the working class; (2) it obviates the injustice of our being obliged to treat, at a capitation fee, all the insured for disease the result of their own misconduct; (3) it allows for payment for the treatment of the insured in institutions if the profession wishes it; (4) it overcomes the income limit difficulty; (5) it gives the doctor a more direct interest in his patient and gives the insured the satisfaction of feeling that they are treated as private patients.

Consideration for your space forbids me to go into the matter at greater length. I will only plead for unity and a pretty general agreement as to the system to be adopted. The profession, even now, does not seem to realise its power, and there is no doubt that we can obtain fair treatment provided that our demands are logical, reasonable, and just.

I am, Sir, yours faithfully,

HUMPHRY J. WHEELER, M.D. Durh.

High Wycombe, Nov. 11th, 1911.

To the Editor of THE LANCET.

SIR,—I desire to lay before the profession a proposition which is not intended to be antagonistic to the work done by our leaders but rather an addition to it. I think it will be seen that the point I wish to make seems in danger of being overlooked, for the fighting so far has been on the question of control, but I think we ought now, if not already too late, to ask, and with no uncertain voice, the following questions: 1. What will be required of us under the Act? 2. What are we to be paid for it?

My reasons for these questions are as follows: 1. Contracts vary in different parts of the country; in some parts of the Midlands a sum of 1*s.* per lunar month is deducted from the earnings of all adult colliery employees and this pays for all medical and surgical attendance on the employee and, where he is married, on his wife and children under 16 years of age, but does not include midwifery, which is paid for extra at 10*s.* 6*d.* per case. In the valleys of South Wales a system of poundage is in vogue, and sums of 2*d.*, or in some cases 3*d.*, are deducted from every 20*s.* earned by colliery employees, and these sums pay for all attendance, including midwifery. The ordinary Friendly Society benefit is too well known to require description. What will the benefit be under the Act? and (2) What shall we be paid for it?

This question must be divided into (*a*) By whom will it be paid and (*b*) To whom will it be paid? As to the main question, we are told that we must wait and bargain with Local Insurance Committees. As to this, I say, Heaven alone can help the profession if we do not make our stand now. At present our paymasters are our private patients and contract employers, be they Poor-law bodies, collieries, works, Friendly Societies, or the like. Who will they be in the future? Under the Act we in working-class practices will have no private patients after two or three years, when the benefits have been extended to women and children, and under the Harmsworth amendment we shall have just as many contract employers.

To whom is the money to be paid? At present we receive the whole of the contract earnings and supply the whole benefit, including drugs. In the future drugs and the doctor are to be divorced. Let me show how this will work under a *per capita* arrangement. It is necessary to understand that a certain sum per head will be allowed, and this sum, whether it be 2*s*., or 20*s*., or the figure of 6*s*. alleged to have been used by Mr. Lloyd George, will have to cover the entire cost of the medical benefit—viz., attendance and medicine. Now, taking an ordinary medical case, what will happen is this: The doctor is called in, and he will diagnose the disease, give clinical advice, and write a prescription. The prescription will be taken to a chemist, who has already bargained that he shall be paid for his drugs with an additional 1*d*. or 2*d*. per bottle for his work of dispensing. This part of the medical benefit—i.e., the supply of drugs—becomes an unknown quantity so far as cost is concerned and may depend in great measure on economical prescribing. Let us assume that the sum of 6*s*. per annum *per capita* has been fixed (and here let me repeat that whether it is 6*s*. or 16*s*. does not affect the principle of my contention), then in a working-class practice of 2000 men, women, and children we may in the first year of the Act assume that there will be 400 insured persons, of whom 50 will come under the doctor's care and require two bottles of medicine each. Allow that the chemist charges 1*s*. per bottle for drugs and 2*d*. for dispensing, there will be a chemist's bill of £5 16*s*. 8*d*., to be paid out of a total of £120, leaving £114 3*s*. 4*d*. for the doctor. This refers to a normal year, but take such a season as 1888–89 then 200 will be under the doctor, requiring six bottles of medicine each. The chemist's bill will then be £70 and £50 left for the doctor, who will have done 12 times as much work as in the normal year. Surely this is absurd and yet it is what is proposed.

Even admitting that the British Medical Association in 1905 did issue a report saying that some form of contract practice is inevitable, and allowing that, so far as the principle is concerned, their hands are tied, their report would not be stultified if they declined to proceed in this matter until satisfactory pecuniary arrangements have been made. I am, Sir, yours faithfully,

ROBERT J. FARMAN, L.M.S.S.A.

Upper Kennington-lane, S.E., Nov. 12th, 1911.

To the Editor of THE LANCET.

SIR,—The bulk of the correspondence on the Insurance Bill is devoted to the questions of the income limit, the method of remuneration, and the abolition of contract practice. May I point out that these matters are intimately bound up with the question of the Addison and the Harmsworth amendments. The Medical Secretary of the British Medical Association assured us recently that the two former would not be stated in the Bill, but that the Association would see that they were equitably settled by local option through the Medical Committees acting under the Addison amendment; but he warned us that there was a long and strenuous fight before us over this matter. Why should we be obliged to fight for our just dues at all? Mr. Smith Whitaker spoke at Hampstead of the need for "the deletion or profound modification of the Harmsworth amendment," but what of the Addison amendment? The Chancellor of the Exchequer has been telling deputations of various persons who will be the insured that under it they have the power to combine and do anything they like. The Harmsworth amendment provides only for "persons who are receiving medical attendance and treatment under any system, or through any organisation existing at the time of the passing of the Act and approved by the Local Health Committee and the Insurance Commissioners." The Addison goes very much further than this: it provides that "(3) the regulations made by the Insurance Commissioners shall authorise the Local Health Committee by which medical benefit is administered, to *require* any persons whose income *exceeds* a limit to be fixed by them, and to *allow* any other persons" (the italics are mine) to contract out of the Bill and "make their own arrangements for receiving medical attendance and treatment," and the Committee shall pay over "for such persons sums not exceeding in the aggregate the amounts which the Committee would otherwise have expended," and, as the Chancellor points out, they can combine and do what they like with them. There is not one word in the amendment to prevent their starting medical institutes or other contract practice at sweating rates. There is not one word to prevent a claim on the bills of a cancer quack, a herbalist, or a professor of Christian Science. There is no mention of the necessity of associations being approved here; there is no indication that the "other arrangements" need be for *legitimate* "medical attendance" at all. This is no chimera; the matter has arisen as one of the difficulties of the German scheme already; and the Medical Secretary told me after the Peckham meeting that the matter was being considered here. May I urge my fellow practitioners to give this matter urgent consideration, with a view to definite instructions being given to our representatives to have the clause so altered in the report stage as to be safe. If we do not, the income limit is worth nothing, for all above must, and all below may contract out, and will be enabled to organise some contract scheme which, while legal under the Bill, will nullify any advantages we may have gained. I am, Sir, yours faithfully,

Catford, S.E., Nov. 11th, 1911. THORNTON COMBER.

To the Editor of THE LANCET.

SIR,—I am instructed to forward you a copy of the following resolution passed unanimously at a meeting of the Broughton Medical Union held on Thursday, the 9th inst.:—

That the Broughton Medical Union reaffirms its unwavering adherence to the declared policy of the British Medical Association, including the six cardinal points of that policy, in relation to the National Insurance Bill; declines to accept any amendments that would defeat the objects of that policy; and is resolved to refuse any arrangements for medical attendance and treatment which do not comply with that policy.

I am, Sir, yours faithfully,

R. B. FLETCHER,

Manchester, Nov. 11th, 1911. Honorary Secretary.

THE STRIKE AND THE DEATH-RATE IN LIVERPOOL.

To the Editor of THE LANCET.

SIR,—The admirably expressed views of your Special Sanitary Commissioner on the subject of social reform and the necessity of an adequate living wage in order that men may live wholesome lives, so delight me that I can forgive him for the perverse fatality with which he unintentionally misrepresents my arguments. My reputation both in Liverpool and before the profession stands, however, so much at stake that I must reply to parts of his letter and correct misunderstandings.

There is no one keener than I am on the maintenance and increase of sanitary service in our cities, nor less inclined to condone any want of public spirit in any grade of life which may interrupt sanitation and subject a community to the inroads of a plague of infectious disease. But I did think we might have discussed a specific scientific problem and garnered its practical lessons as to modes of propagation of one of the direst of diseases without becoming opportunists and attempting to preach political sermons on inadequate texts.

Let me adduce one argument more to clear my reputation as a lover of sanitary science before coming to the narrower specific issue before us. While I hold that no disease broke out or was actually increased by the interference of the strike with sanitary work, I equally hold that such an effect might have been produced, especially if the strike had been more prolonged. With this in my mind, in my first letter to the *Liverpool Daily Post and Mercury*, I suggested that to prevent the possibility of any recurrence in a future strike of interference with sanitary service some terms should be arranged beforehand with labour leaders as to what was to be contraband of war and what not. The problem for municipalities is just the same as for the railway companies, and the policy of pretending to ignore the existence of trades-unionism when there are millions of workmen enrolled throughout the country is, to my mind, identical with the policy of the ostrich. Last August the city authorities had all the power of the police and military behind them, and yet an alderman wrote to the local press explaining that they were unable to get coal in sufficient quantity to their municipal sterilised milk depôts to prepare the milk

for infants, hundreds of whom would in consequence lose their lives unless the strike came to an end. In his letter your Commissioner informs us that the authorities were unable to swill out the slum courts with a fire hose. One cannot help wondering what would have happened had a great fire broken out.

Making all allowances for slight exaggerations, I do not in the least degree condone any of these interferences on the part of the strikers, but surely our action as sensible and thinking people ought to be directed towards preventing their recurrence. We shall never attain this object by crying out in parrot-like fashion: "Down with strikes, repress the strikers, and give them a whiff of grape-shot if necessary," as one London paper suggested. It is of no avail to shake the mailed first of law and order at the workmen, the vast majority of whom are just as strongly in favour *at present* of constitutional action as those who are opposed to them. There is a social disease to be studied, remedied, and prevented, and those who urge the neglect of that study are only hastening our whole social fabric onwards towards destruction by syndicalism, anarchy, and revolution, followed by the inevitable reaction.

Now as to the narrower problem of infantile diarrhœa and the Liverpool portion of the strike, in the first place my opponent ignores dates and my contention based thereon, that the only period when the strike could have caused an effect was on the decline of the disease incidence, where there is no slightest perturbation to show its influence. I would reiterate that an effect cannot precede its cause. Secondly, my adversary accuses me of dealing exclusively with garbage, and then makes a quotation from one of my letters which does not apply to the point in the least. The same arguments apply as to human excreta left in the slum courts by failure of washing down as for garbage. The interruption occurred in the third week in August and the first infant deaths attributable thereto would be in the fourth week in August or first in September, when the epidemic was declining and nothing in the figures shows an influence of the strike. The same remark applies to interrupted health visits. Again, as to the quotation from me regarding the epidemic being uninfluenced by the strike indicating that infection is probably carried from human dejecta and not from garbage. The human dejecta in question mean, of course, dejecta from other infants infected with the epidemic diarrhœa, and not human dejecta in general, such as accumulated for a few days in the courts. The strike did not increase the number of children ill with the disease, hence amount of infection was not increased in spite of the condition of the streets and courts, and the epidemic ran a quite normal course. Thus the use of my own quotations against me, while ingenious, does not appear to me to be quite so ingenuous, and I trust my opponent now sees my line of argument.

The same applies to my comparison of Dublin and Liverpool. It is not a question of which city displays a greater or less degree of perfection in its sanitary arrangements, nor which city experienced the more severe epidemic, but a comparison of the forms of incidence—rise, maximum, and abatement—in the two cities in the months of July, August, and September, one city at a certain period having its sanitation interrupted by a strike while the other did not. It is an attempt on what I regard as scientific lines to get as near as possible to the question of whether the strike produced any effect, and in my opinion the answer is emphatically in the negative. I am surprised at this point being misunderstood.

But if my opponent desires figures as to actual severity, although they do not bear directly on the case, these figures can now be given. Since then the Registrar-General's figures as to deaths from infantile diarrhœa in the big cities of England and Wales have come in, and Liverpool, although the centre of the strike, does not figure so badly, taking into account that it is always somewhere near the top of the list in severe epidemic years. I have calculated for the 48 cities having over 90,000 inhabitants, the number of deaths during the third quarter of this year per 100,000 inhabitants from epidemic diarrhœa. The 12 cities most severely hit are as follows: Stoke-on-Trent, 217; Burnley, 186; Rhondda, 186; St. Helens, 182; Hull, 171; Bolton, 166; Liverpool, 161; West Ham, 153; Stockport, 152; Walsall, 148; Birmingham, 136; Birkenhead, 136. The average for these 12 cities is 168, which is considerably above the figure for Liverpool.

Your Commissioner now admits that "it is difficult to say how far the increased death-rate was due to the high temperature or to the disorganisation of the sanitary service." I take it, therefore, that he now no longer adheres to his former statement that in two of the weeks in August one-third of the deaths were due to the strike. But he still impugns me for stating that there is no proof "that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer or that the strike was connected with this summer's increase," and goes on to accuse me of inviting belief that sanitary measures can do no good.

Never was there a more palpable *non sequitur* to a quotation entirely warped from its setting. The two or three summers in question were cold and wet, and the amount of epidemic diarrhœa was greatly reduced everywhere; my point was that there existed no proof that the fall in death-rate in Liverpool differed from the fall in all the rest of the country. Scientific criticism is wanted for any new method, and my mind is so constituted that I cannot attribute a given result to one of two causes working together when elsewhere the same result follows the action of the other cause working alone which for some reason is ignored by the experimenter.

In other words, the character of the summer for me explains sufficiently the falling off in death-rates in previous summers and the increase this summer, in Liverpool as elsewhere. This I express in a negative way by saying that "there is not a shred of proof that the preventive efforts in the last two or three years possess any causal relationship with the decrease previous to this summer, or that the strike was connected with this summer's increase." Yet I am just as anxious as your Commissioner that these preventive efforts should be continued, and increased, and added to, in order that they may be thoroughly tested, and in the end we may find the cause and cure of the disease so that sanitary science may flourish and abound.

I am, Sir, yours faithfully,

Liverpool, Nov. 13th, 1911. BENJAMIN MOORE.

THE ETIOLOGY OF ENDEMIC GOITRE AND CRETINISM.

To the Editor of THE LANCET.

SIR,—Your editorial remarks upon the above subject recall to my memory a series of investigations which I made into the etiology of endemic goitre when I was residing in Lanarkshire in 1898. The results which I then obtained led me almost to the same conclusions as those at which Captain McCarrison has more recently arrived—viz., that the enlargement of the thyroid is due to hypertrophy, and is instituted for the purpose of neutralising a toxin formed by a virus introduced into the organism in drinking water. The reasons for my conclusions were embodied in a paper read before the Glasgow Medico-Chirurgical Society, and published in the *Glasgow Medical Journal* of February, 1899. They were as follows: 1. That the pathological changes met with in the thyroid gland of endemic goitre, prior to the onset of secondary degenerations, are those of simple hypertrophy of the glandular secreting elements. 2. That the absence of general constitutional symptoms in simple goitre obviously indicates that the excess of gland secretion produced by the hypertrophy is neutralised in the body—presumably by a toxin. 3. That many of the characteristics of the endemic disease indicate that drinking water is the agent which conveys the poison; and as the water can be rendered harmless by boiling it is reasonable to suppose that the poison is a *contagium vivum*.

Finally, it is clear that the reduction in the size of the goitre brought about by the administration of thyroid gland substance by the mouth also strongly supports the theory of toxin hypertrophy.

With regard to cretinism, in which there is, of course, a profound constitutional disturbance, we may assume that in that condition the total amount of thyroid secretion formed is neutralised or destroyed by the poison. The result will be an organism in which the thyroid secretion is deficient or absent, and so cretinism will be brought about.

Such, briefly, are the chief reasons upon which the theory of the living virus can be based. Moreover, an examination of the general features of the endemic disease supplies us with a number of facts which are more easily

explained by this theory than by any other that has hitherto been put forward.—I am, Sir, yours faithfully,

Brook-street, W., Nov. 10th, 1911. DAN MCKENZIE.

OLD AND NEW VIEWS ON THE TREATMENT OF CONSUMPTION.

To the Editor of THE LANCET.

SIR,—I hope Dr. Claude Lillingston will forgive me saying that through taking too narrow a view of the sense of the word *fatal* in his letter in THE LANCET of Nov. 11th, p. 1364, he appears unjustly to charge Dr. C. Theodore Williams with being inconsistent. He says: "Dr. Williams writes of acute cases of phthisis that they 'all pass through an early stage to a fatal issue.' Further on he writes: 'It is true in some of these cases the disintegrating process comes to a standstill and fibrosis sets in—the disease is incapable of cure.' In other words, they all die early; but some don't!" Dr. Lillingston appears here to limit the meaning of the word *fatal* to the sense of *deadly*, ignoring its larger meaning of *inevitable*.

We speak of "*fatal*" results in our manuals of physiology—e.g.: "Reflex Action.—We may define a *reflex act* as the *immediate* motor response to centripetal excitation; it is unchosen, 'fatal'" (Waller). I hope I am not labouring the point in adding the following definition of *fatal*, with examples. Larousse has, "Fatal, e. Fixé irrévocablement par le sort: *les décrets fatals du sort*. Par extension, *Funeste*." "Our *fatal* shadows that walk by us still" (Fletcher).

I am, Sir, yours faithfully,

Worcester, Nov. 11th, 1911. TOM BATES.

EMOLUMENTS IN THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—May I be permitted to comment on that part of the letter of "Civil Surgeon" (in your issue of Sept. 23rd, p. 917) which enumerates five advantages of the Indian Medical Service?

1. "Pay at more than a living wage from the beginning." With this I quite disagree. The pay of some of the billets is a living wage, but there are great inequalities, and nowadays the pay in most billets is only a living wage for bachelors. I myself entered the service near the top of the list; I did not marry till I was 30; I have never played polo or indulged in any expensive sport; I do not drink, or smoke, or gamble. I have had one year of leave home; and I have three children, none of whom have yet been to school. So far from my pay and what I have been able to make by private practice sufficing to meet my expenses, I have spent in addition about £1500 of my own and my wife's money in little more than a decade of service. Had we not had these private means we would be bankrupt. They are now exhausted, and although I have not been home for nearly eight years, I cannot now afford the expense of going home. My wife's life is made miserable by a constant struggle to economise.

2. "An extremely liberal scale of pensions ....." If these pensions were sufficient in years gone by they have depreciated in value now owing to the increased cost of living at home. Moreover, officers in the old days were able to save money to supplement their pensions. Now the great majority of officers can hope to save nothing, or next to nothing. They compare unfavourably with the £1000 a year of the I.C.S. after 25 years' service.

3. "One year's holiday for every three years' work." This is an absolute error. The maximum furlough is one year in every five, if we can be spared. But the service is kept at such a strength that this amount of furlough is not possible to everyone, and I have met few officers who have been able to get all the furlough due to them. Even if it could be got it could not all be taken by officers, on account of their not being able to save sufficient money to afford it. Another thing which prevents furlough being taken is the rule that after taking furlough, or other break in service, as when an officer has gone sick and has had to have sick leave, no more furlough can be taken for three years. This regulation does not figure in the inducements held out to men about to enter the service.

4. "A variety of work and appointments, so that the most diverse temperaments and capabilities can get the sort of 'job' they like. ....." Some do; but the Government has to fill all its billets and a great many men are compelled to serve in uncongenial employment. Within recent years, to gain efficiency and effect economy, the Government has put the entire jail service into the hands of the Indian Medical Service, and it has told men that their only hope of civil employ was in the jail department. Nearly all civil surgeons are burdened with district jails, and the number of purely medical appointments in the Indian Medical Service is really very few.

5. "The privilege that the men with whom you have to work are, as a rule, educated gentlemen of your own social class." I do not quite follow what "Civil Surgeon" means here. If he is talking of civil surgeons, all I can say is that the ordinary civil surgeon is the only bird of his kind in the district, and he hardly ever gets the great privilege of consultation and converse with another medical man of his own kind. It is one of the great drawbacks of the service to anyone who is keen on the scientific and intellectual side of his profession. This isolation is one of the reasons why less original work has been done in Indian medicine than one would have expected from the high standard of quality of the men who have hitherto entered the Indian Medical Service.

I am, Sir, yours faithfully,

Oct. 18th, 1911. ALSO A CIVIL SURGEON.

THE DEMAND FOR PUBLIC ABATTOIRS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Continued from p. 1368.)

THE EXPORT ABATTOIR OF COPENHAGEN AND THE IMPORT ABATTOIR OF MANCHESTER.

The Copenhagen Municipal Abattoirs.

WHEN describing the deplorable condition of the Newcastle slaughter-houses reference was made to Copenhagen. The Danish capital is just on the other side of the North Sea, and there is much intercourse between the two ports. The Copenhagen municipal abattoir is not built after the latest model, nor is it kept so clean and in such good order as to rival the best abattoirs of Germany and Switzerland; nevertheless, it is a very fine institution. The inhabitants of Newcastle should go over on their holiday trips to see what their maritime *vis-à-vis* has done. The Copenhagen municipal abattoir consists of several buildings, with much open space between ornamented with trees or bushes. To my mind, however, the structure in which the horned cattle are slaughtered seemed rather low and dark. It is paved with large cemented flagstones draining into a couple of gutters near the centre of the building. Large windows face each other, and there is an opening along the apex of the roof through which the air passes freely. When the cattle are brought to be slaughtered no attempt whatsoever is made to screen from them the sight of blood and of killing. A good deal of the blood is lost, and though it may not be of much value, still it can be utilised, and unnecessary waste should not be allowed. Above, the rafters are of iron and painted. This is good, for the roof is non-absorbent and easy to clean. The walls are of glazed or enamelled brick up to the height of 10 feet and then of ordinary brick. It is claimed that they are frequently cleaned, but I felt inclined to demur as to the frequency of the process. There is an absence of the smartness and brightness about the place that make German abattoirs look so tidy and clean, and almost disguise the sinister nature of the work for which they are intended. Also there are not sufficient mechanical appliances. Thus men have to lift the carcasses up to hang them on hooks on each side of the slaughter-house. This, of course, should be done with a rope and pulley attached to a travelling overhead rail.

Details of the Work.

If a carcass is found to be affected with tuberculosis all the diseased parts are cut away and the rest is stamped as second-class meat and sold. Every month a notice is published in the papers warning the public that such meat should be very carefully boiled. Of course, these notices do not suffice, for there is no guarantee whatsoever that the advice is followed. For anything we know to the contrary

some of the meat may be sold at restaurants in the form of underdone grilled steaks. Also some of this second-class meat may, when carefully trimmed, look very good and tempting. It would be far safer to boil it and see that it is thoroughly sterilised in the abattoir before allowing it to be sold for human food. A boiling place for feet and calves' heads already exists, and it is much better to do all necessary cooking on the premises before selling the meat to the public.

There is naturally a separate building for the slaughtering of swine. Here some men are employed during all their time to keep the place clean; they are not, however, very successful. Every year one of the buildings or slaughter halls is repainted. Evidently they were not all built at the same time and those that are more recent are better devised. There is one large double-sized hall with a low partition down the centre which is preferable to the others. It has more window space and light from above. A smaller building is reserved for a horse slaughter-house, and in this, as is so frequently the case where horses come with their iron hoofs, the pavement was in need of repair. Then there is the large export slaughter hall where cattle are killed for foreign consumption. It is a fine building and should interest British visitors, as a good deal of the meat derived from the animals killed here is exported to and consumed in Great Britain. (In the Manchester meat market I came across a good deal of Danish beef; it is very popular in Lancashire, because it is lean and there is very little waste.) The greater part of the roof is lantern-shaped, with windows opening all the way round. Below the walls have large windows and the doors are wide. It should be easy to keep the place clean and sweet if the viscera were promptly removed, the intestines cleaned, and the pouches emptied in premises specially constructed for this very unpleasant work.

The Good Points at Copenhagen.

What is really good about the Copenhagen municipal abattoir is the ample space, the broad avenues planted with trees, and the absence of high buildings and of inhabited dwellings close by. The pens also are good, especially those allotted to the big cattle. The flooring is carefully laid to provide a sufficient slope so that all liquids easily drain away to the gutters that are on each side of the central passage. A long trough goes all the way round in front of the cattle, and there is a continual current of fresh water passing before them. The roof is not so lofty, but it lets air and light pass freely. There is naturally a small slaughter-house especially reserved for killing animals known or believed to be unhealthy, and there is also a small building for keeping condemned meat till it can be conveyed to the destructor, which is some distance away. The veterinary surgeons are easily recognised by the uniform cap they wear, and are always present when the slaughtering begins. They are employed and paid by the municipality and not by the butchers, so they have no interest to serve by concealing or acting leniently where anything suspicious is found. Complaints are made that the abattoir costs a great deal of money. Nevertheless, it may be said that in round numbers for every £30 spent £35 (or £5 net profit) are received. This seems a very good return, though with better organisation and greater care bestowed on the utilisation of the by-products a much larger profit might be cleared.

The Manchester Foreign Animals' Wharf.

Sufficient reason has been adduced to show that a municipal abattoir should be built at Newcastle without further unnecessary delay. There are cogent reasons why this is also necessary at Liverpool. The difficulty in England is the tendency to tinker and to compromise. For instance, taking the great roads for international traffic from East to West, Scandinavia, Copenhagen, and Holland send over meat to England viâ Newcastle and Hull, and emigrants land at the same time to be transmitted to the ships that sail for America from Glasgow and Liverpool. What has been done to deal with this trade in a scientific and sanitary manner? One of the best enterprises has been the foreign animals' wharf on the Ship Canal, constructed by the Manchester corporation at Old Trafford. It was opened in 1895, and ships of 5000 to 6000 tons can come alongside and land cattle immediately opposite their pens. Alley ways with strong wooden swing gates are so contrived that the cattle on landing from the ships cannot go astray and cannot turn back, but must go forward till they reach the stables that have been assigned to them. These are lofty and airy, though the floors are slippery and do not seem well drained. When, however, the sewage does ultimately reach a gutter and a drain it flows into two brick tanks that are 26 feet below the floor level of the wharf. These tanks are just behind the engine-house. There is a suction pipe, so that the contents are raised daily and pumped into the neighbouring main sewer. Thus a sufficient fall can be obtained in all parts of the premises to drain away surface water even if mixed extensively with blood and sewage. But the manure and heavier refuse matter is not drained into the sewers. There are three jetties, and the big ships land the cattle at the end of these piers. By the side of the piers barges are moored, and these will hold from 50 to 80 tons of manure; thus there are no manure heaps and no manure is kept on the premises. This is an illustration of the use of a waterway by the side of an abattoir.

Insufficient Slaughtering Accommodation.

There is room at the Manchester Foreign Cattle Wharf to place in comfortable stables 2000 cattle. The more recently built lairage is less lofty, easier to keep warm, but there are louvred openings the whole length of the roof and there is plenty of light. The buildings are very broad, and there is room inside for many rows of cattle, separated by cast-iron posts and wood cross rails, with gates that open into the stalls and close the passages, or open the passages and close the stalls. Overhead there is nothing but the roof, which is lantern-shaped all the way down the centre, with a louvre opening on each side. Then half-way down the broad roof that slopes from the centre to the outer walls the slate tiles are replaced for some feet by window panes which let through a stream of light. These lairs are certainly more satisfactory than the slaughter-houses. The latter are lofty, with walls of white enamelled bricks; there is an opening at the apex of the roof and louvred windows at each end are kept bright and clear. Immediately outside there are small pens where the cattle wait their turn to be pole-axed, and there is a contrivance by which a rope passed through the wall enables the butcher to pull in the animal without risk of being hurt. The doors on the opposite side, and these are sliding doors, face the cooling room, which is reached through a covered way, where are overhead rails to convey the carcasses. Here 500 "sides" may be hung. Then at one end of the cooling room there are three cold storage or chill rooms, each holding 174 "sides." All this is conveniently arranged, but the slaughter-houses themselves seemed to me too small. Instead of a large hall there are five slaughter-houses with two killing floors in each, and these measure only 33 by 45 feet. It would not be possible to kill more than 20 cattle simultaneously, and as there are sometimes as many as 300 cattle waiting to be slaughtered this means working under pressure for as long as seventeen hours. This is wrong from every point of view. It is injurious to the health of the workers and likely to lead to carelessness.

Overlapping and Confusion of Authority.

Nearly all the slaughtering consists of horned cattle imported from America. There are a few Canadian sheep and a small pen and slaughter-house for them, and there is also a small slaughter-house on the landing-stage for the killing of exhausted cattle. To decide whether the cattle may be allowed to rest and recoup from the effects of their sea journey or should be killed at once, and to see if they are generally in a healthy condition, both the Board of Agriculture and the Port Sanitary Authority have their staff of inspectors, who watch the living animals and examine the carcasses. But it was a third authority, the Manchester corporation, that built the entire place. Then, again, though the Manchester corporation does not undertake the slaughtering of the animals, it does all the cleaning. It levies a toll of 4*s.* a head on all the cattle. The cost of the food the animals consume is paid by the importers, and the latter attend to the cattle. More extravagant and wasteful than this strange overlapping of authorities and work is the surrender of some of the most profitable side trades. Why have the best paying sections of the work been allowed to slip through the fingers of the Manchester corporation? If the municipality was justified in building

the wharf, which might have been done by private enterprise, it was still more justified in keeping in its own hands a business that may give rise to many unwholesome conditions requiring supervision, but also bring in much profit.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Hospital Sunday Fund.

THE committee of the Hospital Sunday Fund, in presenting its forty-first annual report, regrets that the decline which set in four years ago shows no signs of abating. The receipts from the collections made on Hospital Sunday of 1911 were £6119 against £6162 in the previous year. It is true the decrease was only £43, but the expenses, which in 1909 and 1910 were generously borne by two members of the committee, have this year to be met from the general fund. The total sum available for distribution, after deducting expenses, is £5977, and of this sum £5946 have been paid to the joint fund (Hospital Sunday and Saturday), whilst a balance of £30 12*s.* 3*d.* has been carried forward. The total sum distributed by the joint funds this year was £13,800, as against £14,530 in 1910, a decrease of £730. The charities participating in the distribution are the same as last year, with the addition of the Children's Convalescent Home at West Kirby, to which a grant of £50 was made. One pleasing feature of the report is the generous contribution of £100 made by the Welsh Church committee. The number of churches contributing has risen from 403 in 1910 to 421 in 1911. The committee is unable to claim any grant this year from the kind donors who promised a donation of 10 per cent. on any increase in the total collections of the joint funds.

Liverpool School of Tropical Medicine.

Professor R. Newstead has returned to Liverpool from his expedition to Central Africa. At the special request of the Government the School of Tropical Medicine sent him to Nyasaland in connexion with the sleeping sickness commission which the Government is sending out under Sir David Bruce. Professor Newstead, who has been absent about six months, was recently appointed to the Dalton memorial chair in Entomology at the University of Liverpool.

Mitchell Banks Memorial Lecture.

The council of the University of Liverpool has appointed Professor F. M. Caird, the occupant of the chair of Clinical Surgery in the University of Edinburgh, to deliver this lecture in the session of 1912–13. The lecture, which formerly was delivered annually, has now been altered to a biennial one. It will be remembered that the lectureship was founded as a memorial to Sir William Mitchell Banks, the distinguished Liverpool surgeon, and for so many years professor of anatomy in University College, Liverpool, prior to its absorption in the University of Liverpool. The nomination of Professor Caird is a happy one, and has given much satisfaction to the medical profession of the district.

Liverpool University Association.

The University Association is to entertain as its guest, at the dinner to be held on Dec. 15th, Professor Michael Sadler, the new Vice-Chancellor of the University of Leeds. The Universities of Liverpool and Leeds have been closely associated for many years, and it will be gratifying to members of the former body to show to the new head of the University of Leeds that they desire the close and cordial relations to continue. The dinner will be held as usual at the Adelphi Hotel.

Munificent Gift to Chester Infirmary.

The Duke of Westminster has contributed £3000 towards the funds of the Chester Infirmary for the extension and renovation of the institution.

Typhoid Fever at Skelmersdale.

For the past few weeks the village of Skelmersdale has been suffering from a severe epidemic of typhoid fever. Upwards of 50 cases have been notified, with 5 deaths.

Nov. 14th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Causes of Crippling.

THE report of the physically defective inquiry sub-committee of the education committee previously referred to contains some useful information as to the causes of crippling. An exact diagnosis was made in 721 of the 728 cases under 16 years of age. The percentage of the distribution of the causal disease was as follows: Tuberculosis, 285 (39·5); infantile paralysis, 175 (24·3); rickets, 73 (10·1); congenital deformity, 71 (9·8); apoplexy, 33 (4·6); birth palsy, 25 (3·5); scoliosis, 13 (1·8); pseudo-hypertrophic muscular paralysis, 5 (0·7); progressive muscular atrophy, 2 (0·2); rheumatism, 3 (0·4); necrosis of bone, 5 (0·4); rheumatoid arthritis, 0·3; flat foot, 1 (0·1); achondroplasia, 1 (0·1); and accident, 25 (3·5). The accidents were mainly burns or being run over. 24 cases due to apoplexy or birth palsy were found to be also mentally defective and have been excluded from the list. Of 828 cases over 16 years of age the diseases were: tuberculosis, 206 (24·9); accidents, 133 (16·1); apoplexy and birth palsy, 116 (14·0); infantile paralysis, 73 (8·8); rheumatoid arthritis, 29 (3·5); rheumatism, 33 (3·9); rheumatic fever, 10 (1·2); congenital deformities, 47 (5·7); venereal disease, 39 (4·7); spinal myelitis, 11 (1·3); cerebral tumour, 3; paralysis agitans, 3; spastic paraplegia, 5; anterior poliomyelitis, 3; disseminated sclerosis, 2; 1 case each was due to amyotrophic lateral sclerosis, Friedreich's ataxia, lumbar pachymeningitis, cerebro-spinal meningitis, progressive muscular atrophy, congenital muscular atrophy, alcoholic neuritis, amputation for gangrene following typhoid fever, diabetic gangrene, flat-foot, frost-bite, white-leg, elephantiasis following scarlet fever; 8 were due to amputation for blood-poisoning and scoliosis respectively, 7 to rickets, 5 to amputation for tumour, 4 to septic poisoning, 3 to muscular dystrophy and necrosis of bone, 2 to lead-poisoning and fragilitas ossium; 60 were unclassified. Two of the cases of septic poisoning followed childbirth. The number of cripples due to tuberculous disease rapidly diminishes as age advances; thus there are 285 cripples under 16 years of age, 117 between 16 and 30, 55 between 30 and 45, 22 between 45 and 60, and 12 over 60. The records for infantile paralysis are somewhat similar, 175 under 16, 39 between 16 and 30, 22 between 30 and 45, 12 between 45 and 60, and none over 60. One of the chief objects of the inquiry was to obtain information about accidents. Of the 133 cases of permanent crippling over 16 years of age due to accidents, 92 were males and 41 females; there were 2 between 16 and 30, 31 between 30 and 45, 50 between 45 and 60, and 30 over 60 (the ages refer to the age of the cripples at the time of examination, not at the time of the accident). Of the 133 accidents, 51 occurred at work, 59 not at work, and in 23 the mode of occurrence was not ascertained.

Birmingham Medical Mission.

The annual report shows that during the past year the buildings have been considerably extended. The total number of cases was 7558, making 33,408 attendances, including 1950 visits at home by the medical superintendent. The work is done in harmony with the efforts of the medical officer of health and the medical officers of the education committee. Children are protected from overwork at school or encouraged to attend regularly as the case requires. Others are introduced to the open-air school, and very many are recommended to convalescent homes and special hospitals. The committee makes an appeal for £250 to enable it to meet the extra expenditure of the year.

Nov. 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University and Degrees in Veterinary Medicine.

THE question of an Edinburgh University degree for veterinary students has been referred to from time to time. Not only have negotiations been satisfactorily concluded, but a draft ordinance has been approved by the University Court, the scheme of which I have already alluded to in your columns. By the full scheme it

is proposed to have two degrees—viz., Bachelor of Science and Doctor of Science—in this department. For the B.Sc. the following conditions are required: 1. Four years of study in veterinary medicine. 2. The candidate must be a Member of the Royal College of Veterinary Surgeons or hold a veterinary diploma entitling him to be registered. 3. In addition to the courses prescribed for the diploma of the Royal College of Veterinary Surgeons, a course of instruction must be taken in the following subjects: practical chemistry, physics, advanced or applied botany or zoology, anatomy of domesticated animals (including embryology and practical anatomy), histology, experimental physiology and physiological chemistry, pathology and bacteriology, protozoology and entomology, sanitary science and veterinary hygiene, and genetics (heredity and the principles of breeding). Attendance at the Royal (Dick) Veterinary College, Edinburgh, shall qualify *pro tanto* for admission to the University examinations. One year of study must be spent at the Edinburgh University, and the Senate is given the power from time to time to determine the proportion of classes to be taken at the University and at the Royal (Dick) Veterinary College. The University Court is given power to determine what other courses of instruction may be accepted by the University other than those mentioned. The examination for the degree of B.Sc. is to consist of three divisions:—First division, chemistry, physics, botany, and zoology; second division, anatomy (including embryology and histology) and physiology; third division, pathology (including bacteriology, protozoology, and entomology), genetics, and sanitary science and veterinary hygiene. Graduates who have held the degree of B.Sc. for three years may offer themselves for the degree of Doctor of Science. Such candidate shall be required to present a thesis or a published work or memoir on a subject bearing on veterinary science or practice. It is provided that this ordinance shall come into force at the beginning of the winter or summer session next after the date of its approval by His Majesty in Council.

Aberdeen County School Medical Inspection Staff.

At a meeting of the Aberdeen County Committee on Secondary Education, held on Nov. 10th, a report was read as to the carrying out of the school medical inspection for the current year. The number of children inspected last year was 9655, and the estimated number to be examined this year is, counting those who have to be re-examined, 15,691. The report pointed out that a third medical officer was urgently needed, and raised the question of the coöperation of nurses in the work of medical inspection in the county. A motion was carried that the matter be remitted to the Medical Inspection Subcommittee for consideration and report.

Nov. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Bill in Ireland.[1]

THE amendments put down by Mr. Lloyd George for the Irish portion of the Insurance Bill show that, so far as Ireland is concerned, it is really a new measure, and that an attempt has been made to meet the two diverging views of the Irish Nationalist party. "Medical benefits" are left out, but the Irish dispensary doctors are to give the certificates needed for sickness, &c. This plan will satisfy the representatives of the rural districts, while the clause by which "medical benefits" may be introduced as an additional benefit by the members of an approved society should be approved by the Members who represent industrial centres. As a result many fear that, instead of getting away from the Poor-law system, its methods will be intensified, while the very club practice which the members of the medical profession in England want to get rid of, and which up to the present has taken little root in Ireland, will now be fully installed here. The real mistake made by the medical profession was in not insisting that under no circumstances would they agree to the contract system of medical attendance. This would have been logical.

[1] See Parliamentary Intelligence for notes on the progress of the National Insurance Bill.

Boarding-out of Workhouse Children.

Lord Mayo, who last week led a deputation to the Local Government Board from the Irish Workhouse Association, pointed out that although 2593 children were being boarded-out, 7279 were still housed in the workhouses. Moreover, 32 unions had taken no steps to board-out any children. The Vice-President of the Local Government Board expressed sympathy with the objects of the association.

The Milk-supply in Ireland.

The *Dublin Gazette* of Nov. 10th announces the appointment of a Vice-Regal Committee "to inquire into the alleged scarcity in the supply of milk in some parts of Ireland, and to report upon the causes of the deficiency, where it exists, its effects upon the public health, and the means whereby the deficiency can be remedied; and also to inquire into and report upon the dangers of contamination and infection in the present milk-supply, and the methods best adapted to guard against these dangers." The chairman is Mr. P. J. O'Neill, J.P., chairman of the Dublin county council, and the other members are Sir John Lentaigne, F.R.C.S. Irel.; Mr. George A. Moorhead, F.R.C.S. Irel.; Mr. Alec Wilson, of Belvoir Park, Belfast; Mr. Dermod O'Brien, president of the Royal Hibernian Academy; Mr. John R. Campbell, B.Sc., assistant secretary in respect of agriculture of the Department of Agriculture and Technical Instruction for Ireland; Mr. Albert E. Mettam, B.Sc., M.R.C.V.S., principal in the Royal Veterinary College of Ireland; Lady Everard, of Randlestown, Navan; and Miss Margaret McNeill, assistant inspector of reformatory and industrial schools, Ireland. It seems unfortunate that the committee should not contain any medical officer of health experienced in dealing with milk-supply. The appointment of the committee has caused surprise, as it is generally thought that if the Local Government Board enforced the Dairies and Cowsheds Order the conditions of the milk-supply in Ireland would be satisfactory. The absence from the committee of a representative of that Board has also caused surprise.

Accommodation for Consumptives in the Royal Hospital for Incurables.

A "public" meeting was held last Monday to protest against the proposed building of a new pavilion for consumptive patients at the Royal Hospital for Incurables, and several speeches in opposition thereto were delivered. Mr. Mahony, consulting surgeon to the hospital, as well as a member of the managing committee, were refused a hearing by the chairman. Mr. Mahony's undelivered speech, subsequently published, showed that the increased accommodation is only from 69 beds to 80. It is to be hoped that the governors will not be deterred by the opposition in the neighbourhood from making the very necessary addition they propose.

"Ui Breasail."

The total receipts of Ui Breasail, the Health Exhibition held at Bates Bridge, Dublin, in May and June last, amounted to £9956 6*s.* 11*d.*, and the expenditure to £7437 14*s.* 7*d.*, leaving a net profit of £2518 12*s.* 4*d.*, more than £1500 of which came from donations. The financial result is disappointing, but the exhibition must be credited with some educative effects. The accounts do not give sufficiently detailed information to justify an opinion as to where the wastage occurred.

A Degree of Sc.B. for Dublin University.

Hitherto Dublin University has conferred only a doctorate in science. In future a degree of Sc.B. may be conferred, for research and advanced study in any important branch of mathematical, experimental, natural, or applied science, on Dublin graduates who have obtained moderatorship in mathematics, experimental science, or natural science, provided one full year after graduation shall have been devoted to any important branch of any of the above-named subjects, both by study and research. Graduates of other universities holding a degree equivalent to the moderatorship shall be eligible on like conditions, provided the year's study and research is passed in residence at Dublin University. Graduates of Dublin or other approved university who have not obtained moderatorship or its equivalent may qualify for entry on the year's course as above by presenting themselves at the moderatorship examination for the intended study and obtaining therein qualifying marks for moderatorship.

The Belfast Water-Supply.

At a recent meeting of the Belfast water commissioners, in discussing the question of an emergency supply from Lough Neagh, it was stated that Lough Neagh had been considered as a source of supply, but experts had advised that it would be dangerous as it received the sewage of various towns. The medical officer of health of Lurgan, Dr. Samuel Agnew, in rejoinder, showed at a meeting of the Lurgan town council that the same statements, supported by the same authorities, had been subsequently made when Lurgan was deciding on its water-supply. They, however, decided to get their supply from Lough Neagh, one inch of water from the surface of which supplied 2,000,000 gallons. The lough covered 100,000 acres, and had a maximum depth of over 100 feet, and a minimum depth of over 25 feet. Such an enormous storage reservoir acted as a great purifying agent, and when the water was pumped up to Lurgan, and there filtered, it became a water of exceptional purity and reliability. The results of analysis made by the Clinical Research Association of the water taken from a tap in the town of Lurgan showed that it was of a high degree of bacterial purity. The freedom of Lurgan from disease communicated by infected water was an additional practical proof of the purity of the Lough Neagh supply.

Belfast Asylum.

In the report of the inspector, Dr. W. R. Dawson, just issued, it is urged that the erection of villas at Purdysburn Asylum should be pushed on, so as to complete as soon as possible the transfer of all the patients there, and so avoid the expense of maintaining two institutions, with the overlapping of staff rendered necessary in some departments.

Alleged Pollution of a River.

At the recent Castlebar sessions, before Judge Doyle, the Marquis of Sligo brought suit against the Westport urban council, seeking an order from the court under the Rivers Pollution Act to restrain the council from allowing the sewage of the town of Westport to flow into the river, which runs through the town and Lord Sligo's demesne to the sea. Evidence was given that the sewage of the town was discharged into the river, and that the latter was in consequence very offensive. On the other hand, it was alleged that there was no nuisance. His honour reserved judgment till the January sessions.

Typhoid Fever in Omagh Asylum.

Referring to the outbreak of typhoid fever in Omagh Asylum chronicled last week the report of the resident medical superintendent, presented on Nov. 9th, showed that the water and the farm milk had been inspected and reported as all right, and the sewerage had also been examined without revealing the cause of this sudden outbreak. It was decided to employ an expert to make a test of the sewers, water-supply, and drainage of the institution, and to report thereon and make recommendations to the committee. At a meeting of the Omagh rural council held on Nov. 11th, in reply to the Local Government Board, asking why no action had been taken in regard to the report of Mr. J. J. Todd, medical officer of health of Omagh [1] as to the nuisance caused by defective sewerage at the lunatic asylum, the chairman said that the asylum authorities had not yet ascertained that the sewerage was at fault. This was the third outbreak at the asylum, and they had been unable to trace the source. Probably the disease broke out through some individual coming to the asylum (? a typhoid carrier). To a question asked by one of the members of the rural council, "Would the sewage passing through Omagh not carry infection?" no answer was given. The Local Government Board is bound to see that sewage from a typhoid-infected institution shall not be discharged untreated into the river passing through the town. This is the point raised by the medical officer of health. On Nov. 13th the deaths numbered eight.

A Parsimonious Board of Guardians.

At Enniskillen quarter sessions, on Nov. 1st, Mr. John Wilson, of Enniskillen, sued the Enniskillen board of guardians for 3 guineas fees and 15*s.* car hire. On August 24th, on a telegram from the relieving officer, Mr. Wilson drove by car to Jubapeeney, county Cavan, 17 miles distant, to attend an operative midwifery case. On reaching the pass leading to the house he had to walk three miles through heather, and over rocks and through a bog. The guardians tendered Mr. Wilson 3 guineas, but objected to pay the car hire. Judge Craig, K.C., said that, if necessary, the doctor should have taken a motor-car. Where the lives of a mother and child were in danger no expense should be spared. It was the duty of the medical officer to take the quickest route. He gave a grant for the full amount claimed.

Nov. 14th.

[1] See THE LANCET, Nov. 11th, p. 1372.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Reunion of Provincial Sanitary Officers.

THE heads of the Bureaus of Hygiene of towns of more than 20,000 inhabitants and the departmental inspectors of hygiene met recently at the Pasteur Institute, under the presidency of M. Vaillard, Medical Inspector-General of the Army. Among those present were by M. Jules Renault, Inspector-General of the Sanitary Service; M. Mosny, Secretary-General of the Congress; M. Vincent, Professor at the Val de Grâce; and M. Chassevant. M. Diénert, Chief of the Water Inspection Department of Paris, made a report on the selection, securing, protection, and surveillance of water destined for drinking purposes. Dr. Mauriac, Inspector of Hygiene of the Gironde, presented a communication on the measures taken at Bordeaux against the invasion of cholera by land. Dr. Marchoux reported on the epidemic of typhoid fever which has prevailed in Paris and in the department of the Seine during the past three months. He said that the Paris water-supply must not be held solely responsible for the recrudescence of the disease, but that the outbreak was rather due to the return to Paris of persons who had contracted elsewhere the germ of the disease. The drinking water of Paris, according to him, is superior to that of many other places, and it should not be spoken ill of. Dr. Marchoux then detailed the various procedures employed to discover the source of the fever, and, finally, he stated that the different vaccines that had been tried had given no good results, with the exception of one constituted of sensitised bacilli—that is to say, cultivated in typhoid serum.

Blennorrhagic Arthritis.

M. Ramond on Nov. 3rd recommended, at the Société Médicale des Hôpitaux, a procedure used by himself in blennorrhagic arthritis when all other therapeutic measures had failed, before having recourse to surgical intervention. He withdraws by puncture from 3 to 5 c.c. of synovial fluid and immediately re-injects it under the skin of the articulation; then a compress of cotton-wool is applied. The injection may be repeated every two or three days if necessary. A cure without ankylosis is usually established in eight or ten days. M. Ramond has treated several cases of arthritis of the knee in this manner, two of which were apparently very serious, for the fluid in them was decidedly purulent. Nevertheless, as microscopic examination did not demonstrate the presence of the gonococcus among the pus cells, M. Ramond did not hesitate to inject the joint contents, but used only 1 cubic centimetre for the first injection. The injection was well borne, as also were the following ones, which were made in stronger doses of from 2 to 5 cubic centimetres. The same procedure gives results equally encouraging in hydrarthroses of all kinds.

The Consequences of the Excessive Heat.

Dearness of provisions and dearth of milk and other foodstuffs have not been the only results of the excessive heat of the past summer; it has unfortunately had a more direct influence on the public health, and the gastro-intestinal and hepatic troubles induced by it have formed the subject of a special study by M. de Fleury. These troubles have been attributed generally to the increased use of iced drinks. This cause may, it is true, hold an important place, but besides this the heat has had a great influence on foodstuffs of animal origin by hastening putrefaction, thus augmenting the virulence of the intestinal pathogenic microbes. It provokes an almost complete substitution of perspiration for micturition, but sweating

cannot make up for the renal insufficiency. The inadequate elimination thus produces an intoxication. Finally, the excessive heat appears to over-work the glandular apparatus and thus to diminish the protective powers of the organism. M. Fleury proposes, in order to augment the renal secretion at the expense of the cutaneous, a *régime* devoid of all food of animal origin, such as milk, eggs, fish, and meat, intestinal antisepsis by means of lactic ferments, and the raising of the blood-pressure in the renal artery by means of theobromine, together with small doses of caffeine.

Death of M. Henri Monod.

M. Henri Monod, a member of the Academy of Medicine, died recently at the age of 68 years. For upwards of 20 years his administrative career had been devoted to questions of public assistance and hygiene. In 1887 he was named Director of Public Assistance at the Ministry of the Interior, to which was added two or three years later the section of public hygiene. As a commissary of the Government he was very active in promoting the law for the protection of the public health, which was, in fact, almost entirely his work.

Nov. 13th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Proposed Reform of the Law Relative to Occupational Diseases.

IN an article on the diseases and accidents to which workmen are liable Dr. Roth has stated in the *Aerztliche Sachverständigen-Zeitung* that the number of accidents due to the fault of employers has decreased from 20 per cent. in the year 1887 to 12 per cent. in 1907, but that the accidents due to the workmen themselves have, on the contrary, increased during the same period from 27 per cent. to 41 per cent. He is of opinion that the increase was not caused so much by the carelessness of the workmen as by fatigue. He believes that the considerable diminution of the hours of work enforced by the law necessarily induces quicker working, and that this fact may possibly be the cause of the increase of accidents due to the fault of the workmen. One of his recommendations is the employment of factory inspectors for the various trades. As regards the diseases commonly associated with certain trades, it is stated that notwithstanding the sanitary regulations a decrease of those diseases has either not taken place at all or not in proportion to the improvement of the sanitary condition of factories and workshops. The number of cases of lead poisoning has increased from its former proportion of 12·2 per cent. to 19·1 per cent. in 1908. Dr. Roth earnestly advocates medical inspection of all the factories where the work is dangerous to health, and recommends careful investigation into the cause of the individual cases, as is prescribed by the existing law regarding accidents. The medical inspection ought to be particularly strict with respect to youths and working women, the latter showing a mortality far above the average—a fact which is the more remarkable as women are by law excluded from a great number of unhealthy or dangerous occupations. The notification of every case of a trade disease ought to be made compulsory, he considers. The number of cases of trade diseases is not extremely great here. In the Berlin municipal hospitals—which, of course, are only a section of the Berlin hospitals—the number of cases of lead poisoning is only 91 per annum, of which 50 per cent. recovered, the remainder being discharged as either relieved or unimproved. Other examples of trade diseases are eczema caused by chemical substances and poisoning by carbonic oxide. When these cases are notified and treated at an early date the patients occasionally recover completely in a short time. Tuberculosis is, of course, in many cases due, at least indirectly, to employment in dusty workshops, but notification of this disease is not yet possible because the connexion between the disease and the trade cannot be exactly ascertained in every case. The new reformed law for the insurance of workmen is a great improvement, because it empowers the Federal council to stipulate that certain trade diseases may come under the provisions of the statutes relative to insurance against accidents, so that workmen unable to follow their employment through suffering from the diseases in question are entitled to compensation, as in the case of an accident.

Modern Treatment of Inoperable Cancer.

At a recent meeting of the Association of German Naturalists and Medical Men Professor Czerny, of Heidelberg, read a paper on the Modern Treatment of Cancer. He said that the principal points in rational treatment were an early diagnosis and an early operation. The results of treatment in advanced cases not permitting an operation would continue to be unsatisfactory as long as the causes of the disease remained unknown, and surgeons must therefore in these cases be content to relieve the sufferings of the unfortunate patients. As a result of recent researches it has been stated that certain lipoid substances produced a strong cancerous proliferation of the epithelial cells. These substances were possibly active in the development of the forms of cancer affecting chimney-sweepers, aniline workers, and tobacco-smokers. The Roentgen rays, by producing dermatitis, prepared a precancerous stage, leading sometimes to real cancer. Chronic irritation of ulcers and scars of the skin, or of the gastro-intestinal mucosa, or of the gall-bladder, might bring on cancer by the action of an unknown irritant and where predisposition existed. Nearly all statisticians declared that cancer was increasing in every civilised country. The increase was not uniform or steady, but occurred epidemically, in certain places more than in others, and in certain times it ceased altogether. Special researches carried out by Dr. Werner in the grand-duchy of Baden had shown that the exciting cause of the disease was present either in the soil or in the houses in which the patients had been living, that the time of incubation was rather long and that the germ was not conveyed from man to man. With regard to modern methods of treatment, Professor Czerny said that to avoid the possibility of cancerous tissue being left in the wound and producing a local relapse he was accustomed to operate in two stages; after the operation the wound was left open and then electrical fulguration, diathermy or exposure to radium rays or Roentgen rays, was resorted to. After three months had passed without the occurrence of a relapse the wound was closed by a plastic operation, and in order to avoid dispersal of the cancerous germs the tissues were cut by an electric cautery instead of a scalpel. Professor Czerny made frequent use of radiotherapy, more than two-thirds of his cases being inoperable. Radium rays and Roentgen rays destroyed the cells of the growth, the tumour becoming smaller by necrosis. Owing to their anodyne effect the patients liked to have the rays administered, although a radical cure was not produced, the cells, but not the germs, being destroyed by the rays. Injections containing preparations or emanation of radium had proved unsuccessful, the insoluble preparations being encapsuled, and thus rendered inert, while the soluble ones passed through the body too quickly to become effective. Salvarsan administered by subcutaneous and intravenous injection has given some suggestive results in sarcoma, but in cancer it was only used in the form of injections within the growth to produce necrosis. The effect of serum-therapy and treatment with antitoxin was not yet sufficiently tested. Professor Czerny then showed three cases of inoperable cancer of the stomach in which he had made the growth accessible and had then given an exposure to the Roentgen rays, with the result that the pain was much relieved. In another case of cancer of the cardia gastrotomy was performed, and the Roentgen rays were applied through the fistula. The growth was then drawn through the fistula and cauterised by an electric cautery. The fistula was sutured a fortnight afterwards on the special desire of the patient. Professor Czerny said that in the cancer hospital at Heidelberg it was found that real cancerous tissue might be successfully destroyed by physical means, but he was opposed to this method of treating patients who were in a cachectic state and had internal metastases.

Nov. 13th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Medical Prospects in South Africa.

NEARLY every local practitioner of any standing has his advice sought from time to time by younger colleagues of his acquaintance in the old country as to the prospects of medical practice in South Africa. There are very few who would advise any home-born practitioner to emigrate to South

Africa at the present time, for the opportunities afforded newly arrived practitioners are by no means attractive. There can be little doubt but that the Union is overstocked with medical men, and the ranks of the local profession yearly are becoming more and more overcrowded and out of all proportion to the increase in the European population. In the larger towns competition has been very keen for years past, and the same is becoming more and more evident in the villages and hamlets. In most country villages one now finds two or even three practitioners where there is really only a proper living to be made by one. Moreover, the expenses of living do not tend to cheapen, and South Africa must still be regarded as one of the most expensive places in the world in which to live—at any rate, with the same standard of comfort as in Britain. The home-born practitioner desiring to emigrate has, perhaps, a better chance of success in the towns than in the country, for though competition is very keen in the former, a newcomer who is prepared to wait can, as a rule, eventually establish himself in practice. In the villages, unless he is very lucky and able to find a place where the opposition is exceptionally weak, he does not stand much chance of success. In most country villages he must equip himself with a good working knowledge of the Taal, but even with this he will usually find that an Afrikander opponent will have the advantage of him, not only in selection for all public appointments, but in private practice as well. It is true that the day has gone when the British practitioner is boycotted on account of his nationality, but, nevertheless, if in a Dutch district he is opposed by an Afrikander practitioner he will find out, unless his opponent be extraordinarily incompetent, that the practice will become divided up to a very large extent on racial lines, and in case of a public medical appointment falling vacant in his district both Church and State will be arrayed against him should he seek preferment.

Apart from present difficulties, it is rumoured that a new Medical and Pharmacy Act has been drafted for the Union on radically different lines to that drafted for the assistance of Government by the medical councils of South Africa. It is stated that the draft Act contemplates the opening up of the country to all practitioners who are qualified to practise in their country of origin. It is to be hoped that the rumour is not true, for it would virtually mean that South Africa will be again over-run with the quack and the charlatan; even if this could be guarded against, inevitably there would be a lowering of the ethical code, which, under present circumstances, is by no means on as high a level as could be desired. One feels that the rumour is likely to be true, for it is notorious that several of the present Ministers have expressed themselves at various times in favour of opening the gates of practice to the talent of all nations. It is well known, also, that one Minister at least has stated his rooted objection to the Medical Council system, and it would seem likely, therefore, that the new legislative proposals may not enable disciplinary action to be taken in case of professional misconduct. For years past Ministerialist organs have expressed disapproval of the powers conferred upon the medical councils of the Provinces. Only the other day *De Volkstem*, which is supposed, as a rule, to reflect Ministerial opinion, had fault to find with any law which protected medical practitioners by penalising those who practise without a licence. It quoted the case of the cancer quack, Mrs. Van Niekerk, who, it contended, proved conclusively that she had greatly assuaged the sufferings of those whom doctors from "Oxford and Cambridge" had given up as hopeless. It omitted to mention, however, that the claims of Mrs. Van Niekerk to cure cancer were carefully sifted by a Select Committee of the House of Assembly at the Cape some years ago and were found wanting, and that this person has been repeatedly fined by magistrates and was once indicted for manslaughter for causing grievous bodily harm to a patient which resulted in death. *De Volkstem*, in the same article, recalls how in their wanderings on the Great Trek, the Boers of old were entirely dependent upon the skill of wise women and of others who had gained a knowledge of medicinal herbs and of simple remedies, and that they managed very well for years without licensed doctors. The article concludes by insinuating that the reason for the high death-rate in the concentration camps was because medical men and not "wise women" were employed. Apparently the author of this effusion would have the profession legislated out of existence; though *De Volkstem's* opinions on the need or otherwise for stringent laws to govern the medical profession and to safeguard the public are doubtless not a proper reflection of ministerial views, the article is significant in that it does represent undoubtedly the views of the "backveld" Boer. Under all the circumstances one would be inclined to issue a strong warning to any practitioner thinking of settling in South Africa to the effect that for the present, at any rate, this country has little to offer to any newcomer who has to earn his living by means of his profession.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Malaria in the Punjab.

A NOTABLE Government report[1] has been issued, entitled "Malaria in the Punjab," which deals specially with the great epidemic of 1908, when Amritsar suffered so severely and the province lost 307,300 persons in a little over two months. The Punjab, it may be stated, is the only province in India which suffers with any frequency from terrible autumnal epidemics of malaria. Major S. R. Christophers, I.M.S., writer of the report, distinguishes between ordinary seasonal malaria of the autumn and the fearful epidemics of malaria which occur in certain years and which wipe out the inhabitants of cities and villages. This virulent type he calls "fulminant malaria." As an example of the ravages of this "fulminant" type of malaria may be cited that of the city of Umballa, which lost in the month of October, 1890, no less than 17,025, a death-rate of 1200 per cent. above normal! Major Christophers says he at first thought the epidemic of 1908 to be quite unique in its virulence, but when he examined the facts of the last fifty years he was surprised how frequently such serious outbreaks had occurred. The worst years have been in 1876, 1878, and 1879, then the years 1890, 1892, and 1894, and in the present century 1900, 1901, 1903, and 1908. He found that the difference in the years was so marked that while in 1905 and 1907 the autumnal mortality was between 60,000 and 80,000, in 1900 and 1908 it was between 250,000 and 300,000. He therefore made a careful study of the causes of these variations. One obvious factor, of course, is the rainfall. Heavy autumn rains in the Punjab mean a spread of malaria. The following figures show the importance of this factor: For 20 years in which rainfall was deficient the average mortality was 81,000; for 10 years in which rainfall was normal the average mortality was 104,000; for nine years in which rainfall was excessive the average mortality was 177,000. On examining the districts affected he found that in the West Punjab, where rainfall is scanty, "fulminant" malarial epidemic is very rare. In the south-east and sub-montane Punjab, such as Delhi, Amritsar, Gujranwala, and Gujrat, where rainfall is often heavy, the "fulminant" malaria epidemic often appears. He further found that its chief centres were the "riverain" districts (i.e., districts which have old beds of rivers) and also the flood lands along the banks of rivers from which the rainfall could not drain off quickly. In such places, where the country remained flooded for days, the "fulminant" type of malaria appeared most frequently. On the other hand, where drainage was good and the water did not remain standing for days, this "fulminant" malaria very rarely occurred. Thus the conclusion is clear, and I give it in Major Christophers's own words: "The removal or prevention of flood water in or near villages should be the first step in the sanitation of all rural districts." The same held good for the cities of Delhi and Amritsar, where flooding from river-beds and low-lying grounds near the city walls makes a dangerous state of affairs. Amritsar is nothing less than a water-logged city. The subsoil water is only three feet from the surface and the soil is clayey and the land flat. Thus malaria causes more deaths than plague, and it is sad to see the finest Indian peasants—the sturdy Punjabi—being ruthlessly decimated by malaria under the above conditions. It is useless to talk about mosquito destruction in some of these places, when quinine distribution and drainage are the

[1] This may be obtained from Messrs. Gulab Singh and Sons, Lahore, for 2 rupees.

two sanitary agents to push. In cities and villages, of course, small pools may be so treated, but these are often better filled up. There is another factor for which a remedy is harder to find, and that is scarcity of food. A year with short rains may be feverless, but if crops have no rain there is less food and higher prices. This lessened food-supply causes loss in stamina. Hence, if this is followed in the next year by a heavy monsoon (with large areas of mosquito breeding grounds) there will follow "fulminant" malaria. Better economic conditions alone can counteract this mortality. This would mean for the peasants a surplus from previous good harvests and freedom from debt. But those who understand how the Indian agriculturist is imposed upon by rich zemindars in the conditions on which he holds his land will be able to appreciate my remark that at present "better economic conditions" is but a dream. Government has started coöperative credit banks which deserve to be widely made known to the ignorant villagers. Major Christophers's conclusions may be briefly summarised as follows: 1. Economically "fulminant" malaria is by far the most important factor in the Punjab to be combated by sanitary and other measures. 2. There have been many "fulminant" epidemics in the Punjab in the past 50 years and with proper scientific measures these might be much lessened in the future. 3. The most salient feature of the epidemic is excessive mortality, especially among children. 4. These epidemics start from a centre or centres in every direction. At the centre is the heaviest mortality, sometimes rising to the weekly mortality of 500 per 1000 per annum. 5. The determining causes are excessive rainfall and food scarcity. The worst epidemics are apt to occur when a heavy monsoon succeeds a period of deficient rains. 6. The epidemic areas are not coincident with the heaviest rainfall areas, but with areas of floods. The drainage of flood waters is of first importance.

Lahore Medical College.

Major D. W. Sutherland, principal and professor of medicine, has just returned to India from deputation to England in connexion with the King Edward Memorial at Lahore, which is to take the form of very extensive improvements to this college and hospital.

Oct. 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Ninth Australasian Medical Congress.

THE Ninth Australasian Medical Congress assembled in Sydney on Monday, Sept. 18th, under the presidency of Dr. F. Antill Pockley. The delegates were formally welcomed on Saturday, the 16th, at the Town-hall, by the Lord Mayor of Sydney, Sir Allan Taylor. In the afternoon a reception was given at the University by the President and Mrs. Pockley. On Sunday special services were held at the Anglican and Roman Catholic Cathedrals, and at Stanmore Methodist Church. The Anglican Primate, Archbishop Wright, preached the sermon at St. Andrew's, and Archbishop Kelly officiated at St. Mary's. On Monday the business session was opened, and the committees on hospital abuse and contract practice abuse presented reports. In connexion with the latter, it was stated that the resolutions affirmed at the previous Congress as to a wage-limit clause being inserted in friendly societies' agreements had not been enforced in any State except New South Wales, where the professional organisation is very complete. The resolutions as to hospital abuse, agreed upon at former Congresses, were reaffirmed, with the addition that in the event of the financial support of the hospitals being undertaken by the Government patients able to obtain medical services outside the public hospitals should be excluded, and that in any event boards of management should be retained. The main purport of the reaffirmed resolutions was that no payment should be taken from patients in hospitals supported by Government grant or private benefaction, and that intermediate hospitals should be established, without staff, into which any practitioner might send patients under approved conditions and attend them there. Dr. R. Worrall, who introduced the report, spoke strongly against the proposals of the New South Wales Government for the nationalisation of hospitals, and the general feeling of Congress was entirely in sympathy with his attitude.

On Monday evening the Congress was formally opened by the Governor-General, Lord Denman, and Dr. Pockley delivered his inaugural address. The gathering was a very brilliant one, and distinguished representatives of all professions were present on the platform. The visitors were welcomed by the Premier of New South Wales and Sir Allan Taylor. Dr. Pockley's address dealt with various problems of medical science, and he expressed himself against the present socialistic trend of thought, which looked to nationalisation of medical service as a desirable ideal. On Tuesday work was begun in the various sections and proceeded throughout the week. The address in Surgery was delivered by Mr. G. A. Syme, of Melbourne, who reviewed the advance of modern surgical achievement, which he thought was not so extensive as was sometimes supposed, although operations were now much more safe than formerly and much more frequently undertaken. Mr. Syme dealt with his own personal experience of intra-thoracic surgery by means of tracheal insufflation and the great field of modern operation for appendicular and gall-stone affections. He also paid a high tribute to the achievements of two young Melbourne surgeons, Dr. T. P. Dunhill, in the surgery of the thyroid gland, and Dr. Basil Kilvington, in the resection of nerves for paralytic conditions. In the Section of Medicine Mr. W. T. Hayward, of Adelaide, delivered the presidential address, sketching the newer developments in medicine. At the same time he deprecated the fact that the modern student was overloaded in the attempt to keep pace with them. Mr. W. Beattie Smith, in the Neurological Section, pleaded for more accurate study of the causes of insanity. Mr. F. J. Clendinnen, in the Section of Radiology, and Mr. Herman F. Lawrence, in that of Dermatology, dealt chiefly with the action of radium in malignant disease. Both held that radium was of use in lessening the probability of recurrence, and should be used both in pre-operative and post-operative conditions. Dr. G. Rothwell Adam, in the Section of Gynæcology, and Dr. A. Jeffreys Wood, in that of Diseases of Children, reviewed recent work in its bearing on these special departments. In the Public Health Section Dr. B. Burnett Ham introduced a discussion on the Prophylaxis of Venereal Disease, and gave an outline of the work done in Melbourne, where a system of notification had been carried out for a year, supported by a Wassermann test in each reported instance. Of 5000 notifications some 1900 had given a positive reaction, and 400 a partial one. The whole of the testing was carried out by Dr. Konrad Hiller. Dr. Ham concluded with a series of proposals for the regulation of venereal disease. Chief among them were an impersonal notification; establishment of dispensaries open at night for gratuitous treatment; penalty for communication of venereal disease; segregation of dangerous cases; the suppression of solicitation and of impure literature, among other things. These things, he suggested, should be undertaken by the State. An educational campaign was also proposed in the form of a "Red Plague League," to be composed of men and women of all classes who should distribute literature and make known the dangers of venereal disease in other ways. Professor H. B. Allen strongly deprecated the teaching of sexual physiology in schools, as was sometimes advocated, which he thought would do more harm than good. Dr. Pockley held that such teaching would be beneficial.

At the final business meeting Dr. Dick's motion was adopted to establish a standing committee of Congress to watch medico-political events and report from time to time, such a committee to be representative of all States. Other resolutions of Congress called on the New Zealand and State Branches of the British Medical Association to enforce the clause passed at the last session of Congress, held in Melbourne in 1908, forbidding medical men to pass for professional attendance at contract rates any man whose income, together with that of his wife, exceeds £4 per week, or to attend any present member whose income, with that of his wife, exceeds £6 a week. To facilitate this, steps were recommended to be taken to strengthen the Australasian branch and to form a fund for those members who may suffer financially through such prohibition. The attention of Congress was also directed to the inadequate remuneration for club practice in some parts of Australia, and medical

men were forbidden to act as medical officers for proprietary aid or benefit societies unauthorised by the Standing Committee of Congress. The adoption of a *per capita* basis and not a fixed salary was also recommended.

In the Naval and Military Section resolutions declared inadequate the terms of service and pay of the Commonwealth Naval Medical School as at present outlined, and recommended the formation of a committee to discuss the subject with the Naval Board. The Section of Pathology, Bacteriology, and Tropical Medicine urged representations to the Federal Government to secure adequate funds and staff for the Australian Institute of Tropical Medicine. The Public Health Section passed resolutions dealing with feeble-minded children, the relationship to disease and the classification of Australian mosquitoes, the giving of death certificates, the formation of a central committee to deal with the collection of Australian medical data and statistics, the compulsory teaching of hygiene in State Schools and for older girls of the feeding and rearing of children, the detention of venereal prisoners for treatment, the compulsory notification of disease, and the treatment of venereal disease by non-qualified practitioners. The Sections of Neurology, Pathology, Public Health, and Diseases of Children urged the making of infantile paralysis compulsorily notifiable. The Section of Ophthalmology called for a proper course of technical instruction for spectacle-makers, demurred to legislation authorising opticians to test vision, and demanded the legal restriction of the term oculist to legally qualified medical practitioners. The next meeting of Congress was fixed for 1914, to be held in Auckland, N.Z., under the presidency of Dr. Arthur Purchas.

Friendly Societies Dispute.

An acute rupture has taken place between the medical men in Adelaide and the executive of the Adelaide United Friendly Societies Dispensary. Hitherto no dispensaries have existed in Adelaide, the lodge surgeons either dispensing their own medicines or having an arrangement with chemists, and charging a covering fee for such service. The lodge surgeons are of opinion that the proposed dispensary service does not offer a fair remuneration, and they object particularly to a scale of fees for operations in connexion with it. The outcome was that 83 medical men, comprising all the well-known Adelaide practitioners, issued a manifesto in the public press declining to accept the proposed terms. The Victorian branch of the British Medical Association passed a sympathetic resolution urging its members not to apply for the advertised positions. The Friendly Societies allege that they can fill the positions in spite of this opposition, and the matter remains for the present at this stage.

The Medical Service of the Federal Defence Scheme.

A disagreement has arisen between the Federal Defence Department and the medical profession over the remuneration to be paid for examination of cadets for the compulsory service scheme. The original arrangement was to pay area officers £25 for examinations within each area, but this was deemed inadequate, and the profession agreed to demand 2*s.* 6*d.* per head. To this the department disagreed, and proposes now a sum of £60 for area officers who would also be called upon to give certain attendance to the permanent staff within the area. The matter is not settled, but the department states an adjustment can probably be arrived at.

Oct. 4th.

THE AFTER-CARE ASSOCIATION.—Three meetings have recently been held on behalf of this society, whose objects are to assist poor persons discharged recovered from asylums for the insane. At Bath, through the kind invitation of Mrs. Blackburne, when the Archdeacon of Bath presided, and addresses were given by Dr. Maurice Craig, Dr. N. Lavers, and Mr. H. Thornhill Roxby. At Hampstead, at the kind invitation of Mr. and Mrs. Adair Roberts, Mr. Roberts presiding, short speeches explaining the work were made by Dr. Craig and Mr. Thornhill Roxby. At Bethlem Royal Hospital (by permission of the governors), Dr. Stoddart being in the chair, the audience was addressed by Alderman Sir William Dunn, Dr. G. H. Savage, Dr. J. Chambers, Dr. Robert Jones, the Rev. H. Stephens, and Mr. Thornhill Roxby. During the past year applications on behalf of 379 cases were received from various parts of the country.

Obituary.

SIR SAMUEL WILKS, BART., M.D. LOND., F.R.C.P. LOND., F.R.S.,

LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, AND CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

Samuel Wilks was born—as he himself has told us in his fascinating biographical reminiscences, reviewed in our columns only two weeks ago—at Camberwell on June 2nd, 1824. He was the second son of Joseph Barber Wilks, a cashier of the Honourable East India Company's service, a company which had claimed the life work of several of his ancestors. He received his early education at Aldenham Grammar School, Herts, and later at University College School. In 1840 he was apprenticed to Mr. Richard Prior, surgeon, of Newington, and attended at Guy's Hospital, matriculating also at the University of London. In 1847 he was admitted a Member of the Royal College of Surgeons of England, and took the M.B. of London University in the following year, graduating with honours in physiology and comparative anatomy, surgery, and medicine. In 1850 he took the M.D. degree at the same University, again with honours, and in 1851 became a Member of the Royal College of Physicians of London. He was elected to the Fellowship in 1856. He filled most of the offices of the College at various times, having been Examiner in 1867, Councillor in 1870 and again in 1880, Censor in 1875–76 and again in 1888, Vice-President in 1890, and President from 1896–99. In 1879 he delivered the Harveian Oration at the College, in which he laid stress on scientific investigation, in addition to the treatment of disease, as the daily task of the medical profession, and in happy vein contended that elevation of thought, imagination, poetry, and the love of the beautiful are no monopoly of literature and the fine arts, but belong equally to the pursuit of medicine and science.

In 1853 Dr. Wilks obtained the appointment of physician to the Surrey Dispensary. The prevalence of typhus fever in Bermondsey at that time afforded him the opportunity of studying that disease at first hand. Typhus had only recently been clearly distinguished by Sir William Jenner from typhoid fever, the two diseases having been previously confounded, under the common name of continued fever. Wilks's studies fully confirmed the correctness of Jenner's observations. He was for a year physician to the Infirmary for Children in Waterloo-road.

Wilks's connexion with Guy's Hospital was long and fruitful. After serving as medical and surgical registrar he became curator of the Museum, demonstrator of morbid anatomy, and subsequently lecturer on pathology, an appointment which he held for ten years—namely, until 1865. During this period he published the Pathological Catalogue of the Museum of Guy's Hospital, a valuable work of reference. In 1856 he was appointed assistant physician to Guy's Hospital. In 1865 he exchanged the lectureship on pathology for that on medicine, and in 1867 became full physician and continued to act in that capacity until 1885, when he was appointed to the consulting staff. For several years he edited the *Guy's Hospital Reports*, which have served him and the profession so good a turn in enabling him, in his recently published "Biographical Reminiscences," to recall and set forth methodically his own personal knowledge of many interesting developments of medicine recorded or illustrated therein. In 1864 Dr. Wilks was a member of the Contagious Diseases Commission, and later, 1870, of the Royal Commission on the Contagious Diseases Act. In 1867 he became examiner, and in 1885 a member of the Senate, of the University of London. He had previously, in 1868, held the post of examiner in medicine at the Royal College of Surgeons. In 1887 he became a Member of the General Medical Council.

In 1870 Dr. Wilks was elected a Fellow of the Royal Society. In 1879 he was appointed physician to Their Royal Highnesses the Duke and Duchess of Connaught. In 1884 he received the honorary degree of LL.D. from the Edinburgh University. In 1897 he was created a baronet, and was honoured with the appointment of physician-extraordinary to Queen Victoria. In the same year he was awarded the Moxon gold medal, an honour conferred by the Royal College of Physicians of London on "the person who shall be deemed to

have most distinguished himself by observation and research in clinical medicine." In the following year, during his tenure of the Presidency of the College of Physicians, the memorable banquet to the medical profession was given at the Mansion House by the Lord Mayor, Colonel H. D. Davies, M.P. He also had the honour of admitting the late King Edward, then Prince of Wales, as an Honorary Fellow of the Royal College of Physicians. He retired from practice in 1904, and during the closing years of his life lived at Hampstead.

Of Sir Samuel Wilks's literary works the most important was the publication in book form, in 1859, of his lectures on Pathological Anatomy, which soon became out of print. In the preface the author stated that they contained no statement unverified by his own observation and experience. A second edition appeared in 1875, the work of preparation having been entrusted to Dr. Walter Moxon, who carefully retained the original character which was so great a feature of Wilks's work, and which caused "Wilks and Moxon" long to remain a standard textbook on pathology. The book reached a third edition. His lectures on Diseases of the Nervous System, published in 1878, had excited much interest at the time of their delivery, some ten years previously. In this work all the author's acquisitions from observation and reading were well digested and assimilated, and the description of disease was always accurate, though sometimes scanty, as was also the case in the matter of treatment. Besides the Pathological Catalogue of Guy's Hospital Museum, previously referred to, Sir Samuel Wilks published in 1892, in conjunction with Mr. G. T. Bettany, a biographical history of Guy's Hospital. Other works were his lectures on "Specific Fevers and Diseases of the Chest," published in 1874, and the article on Addison's Disease in Vol. V. of "Reynolds's System of Medicine" (1879). He also edited Addison's works, and his contributions materially helped to clear up some of the obscurity surrounding the pathology of Addison's disease. Besides occasional contributions to the medical press, some of his papers on Alcoholism and Vivisection were published in the *Contemporary Review* and the *Nineteenth Century*.

We have enumerated the many claims upon the recollection and gratitude of the medical profession that can be advanced for Sir Samuel Wilks; we append two eloquent personal appreciations of the great physician.

Dr. Hale White has sent us the following note on the career of his friend and master:—

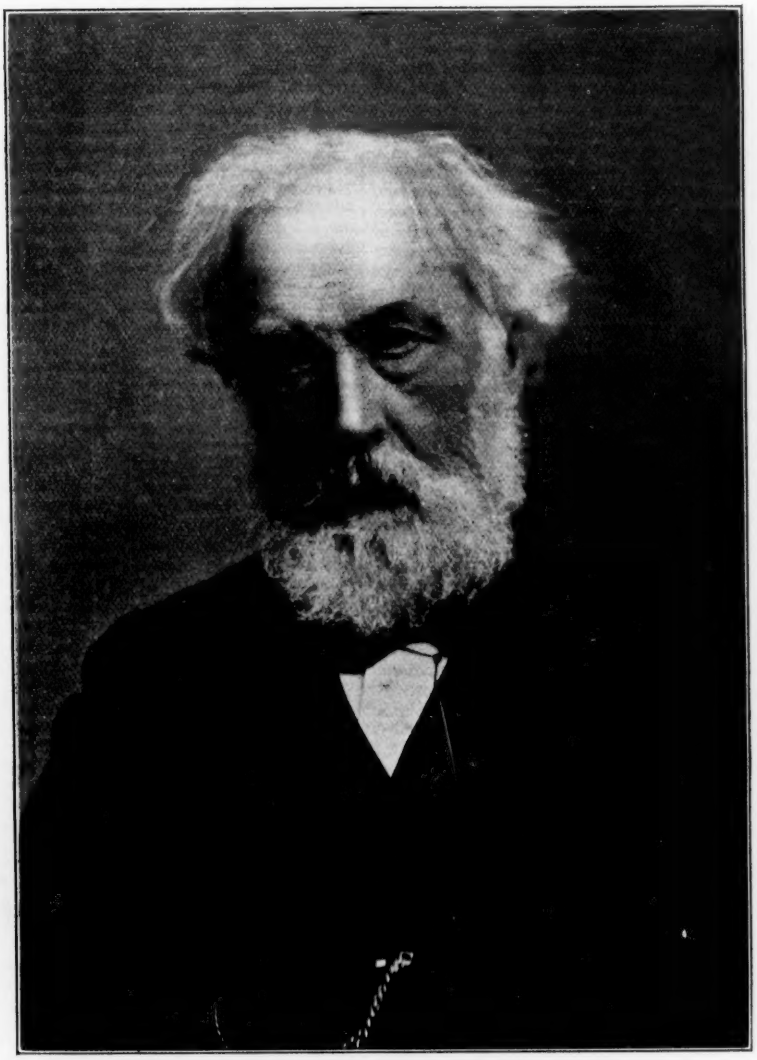
"When Death came as a friend to Samuel Wilks he took with him a great man, one of those rare blessings to the human race who besides commanding our admiration for their intellect compel our affectionate reverence for their influence on us. He did not preach, but after talking with him you left him with a fresh incentive to work for its own sake and feeling that never would you be a party to any humbug, intellectual or other. It was his enthusiasm for scientific progress, his constant interest in the investigations of others, his encouragement to beginners, his honesty, his hearty contempt of dishonesty, and the way in which he exemplified that medicine was at its highest, not when it was a means of livelihood, but when it was an intellectual pursuit—it was all these points that made him loved by those who fell under his spell, that made young men determine to do their best, that led to delightful Sunday evenings at his house in Grosvenor-street, and later on to pleasant walks to see him at Hampstead. Twenty-seven years have passed since he ceased to be on the active staff of Guy's Hospital, but affection for him never waned, and many of his old pupils and friends have gone to Hampstead until the end, from time to time, to enjoy his company. He was a great talker, and as his good talk flowed on none noticed the flight of time. It might be that if you called on him about 3 you would find him smoking a cigar; this would go out as he talked, and at 4 two cups of coffee and some muffins would appear; these would all get cold, and when the talk ceased the cigar stump was relit, the cold coffee was drunk, and the cold muffins were eaten. His fine, beautiful face and his ironical sense of humour added to the charm of his company. Artists and sculptors innumerable have tried to reproduce his features—indeed, at one time he nicknamed himself the professional beauty, so frequent were these efforts.

"He often used to say that Guy's was his life; certainly no one has ever been more devoted to it or added more to its reputation. He was proud of its school, and, following his predecessors Bright and Addison, kept up its tradition that accurate and scientific observation should form the basis of medicine. To him the post-mortem room was as important as the ward, and his teaching has shown many hundreds of students that each case of disease is a problem to be unravelled, and in so doing has made their life's work a pleasure instead of a drudgery. It is 30 years since he gave up lecturing, and his lectures themselves were not, as far as I remember, especially attractive, but the matter was so good that the students begged him to reprint them; so those on 'The Specific Fevers and Diseases of the Chest' were published privately and could be bought at the hospital. Later on his 'Lectures on Diseases of the Nervous System' appeared and were eagerly read by his old pupils. As a teacher he rose above ordinary teaching, and you left him at the end of a round in the wards feeling not so much that you were richer in knowledge as that you had been taught how to use it, how to think, and that you had been inspired with an earnest desire to unravel problems for yourself and become a philosopher.

"Wilks was a great observer, but I am not now attempting to speak of his additions to medical knowledge which have made him famous. He was many-sided and always praised those who did thoroughly good work, even if he had no sympathy with it, and he had to an extraordinary degree the happy faculty of always being interested in something, provided it exercised his mind. He never lost this power until his final unconsciousness, and the way in which he exercised it to banish the tedium and loneliness of old age was wonderful. He was well read and fond of good literature. The photographs on his bedroom mantelpiece during his last illness were those of Wendell Holmes, Wordsworth, and Harriet Martineau. To the end he read his medical journals, and his interest in all kinds of knowledge made him one of the chief members of the Hampstead Scientific Society and gained him many friends among his neighbours. The longer you knew Wilks the more you loved and admired him, and only accident would lead to the discovery of his devotion to those of whom he was fond and his many generosities. As he got older the heroic fortitude with which without a murmur of complaint he put aside the suffering of his illness and drove it out of his thoughts by occupying them with reading, writing, and thinking, revealed a self-control that seemed well-nigh impossible. Not until the end came did the light of his mind cease to burn as bright, steady, beautiful, and clear as ever. To him, indeed, was the hackneyed phrase 'grand old man' applicable; he was a man who would have been a glory to any profession, and happily for us he chose that of medicine."

Yet another friend and colleague has sent us the following eloquent tribute to Wilks's merits as man and scientist:—

"With the death of Sir Samuel Wilks there passes out of the possession of Medicine a remarkable personality. He stands out as the one of all others in England who first set up pathology on its proper bedrock, by the careful record of his daily work in the post-mortem room of Guy's Hospital. His published lectures on Morbid Anatomy should thus ever remain a commanding monument to his memory, as we hope they will also ever be the pride of his school. For although that which a man sows is not that body that shall be, and even the morbid anatomy of one generation is not exactly that of the next, let the almost complete disappearance of 'pyæmia' and even infective disease, as Wilks saw them in his day, bear witness. The book is so carefully descriptive of the appearances of disease in all its aspects, as seen after death, that it must ever remain full of information for those who appeal to it. But what of the man himself? He was indeed a great man by the amount of enduring work that he did, and the amount of thought that he gave to it all, but he was possibly even greater by the unconscious power that was in him for gaining the affection of all his associates. Go anywhere one would, amongst his former pupils, and 'How is Wilks?'—it was, indeed, often more lovingly, if less reverently put—was sure to come. He was everywhere the subject of fond remembrance, and he had entwined himself into the very heart of Guy's Hospital in a way that looking back over 40 years, and into history beyond it, one may doubt whether any other man has ever done, unless it were Edward Carr or Arthur Durham. What was it that so endeared Wilks to his fellows? We might not all agree in this estimate, but three



SIR SAMUEL WILKS, BART., M.D., F.R.C.P., LL.D., F.R.S.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.
(Reproduced from a photograph by Messrs. Elliott and Fry.)

characteristics in chief seem to me to have determined it: his pride in Guy's Hospital; his inborn honesty; and his fund of rippling, gently cynical humour. There were plenty of other attractive features in him too. No man was more absolutely free of all self seeking; he was always too just himself. No one, I think, ever saw two sides to Wilks's character; he was always his own honest, kindly, humorous self. He was ever ready to help a struggling friend. One might think to read his character in great measure from his outward form—a somewhat loose figure and a decidedly non-martial gait. Although a close observer, he seemed to be always in thought. His fine head, his white hair, his long locks, the wondrous blue and twinkling eye that always seemed to illustrate the old proverb, "The mice are at play when the cat is away," in that it always seemed needing a special centre of control whilst he was carrying on some mental operations inside. He constantly gave one the impression of talking to you whilst being partly engaged elsewhere. I think he liked to follow his own train of thought rather than to discuss. There were therefore some who consulted him who were wont to think that he did not understand their case. The fact probably was that his range of its consideration was so wide that the particular symptom that commanded *their* attention did not particularly interest *him*. For a similar reason it would have been impossible to think of Wilks as a specialist. His mind ranged widely over the sick man himself to trace the order of his going. To him the study of mankind was man, and his outward form, the colour of his hair, the furrows on his nails, the condition of his skin, his mode of thought and speech, and so on, would lead him far afield into the hidden causes of things, and the origin of those grosser changes that he knew so well, and that had taught him so much in heaven and earth. Morbid anatomy, in setting him to ponder, had indeed taught him well, and his interests were manifold. The human mind, psychic force, the mental operations of his parrot, the origin of music, the nature of dreams, superstitions, furrows on the nails, scientific therapeutics, were a few of the many subjects which he handled, but the fads and fancies that so sadly beset too many of us he surely must have regarded with but a benevolent neutrality, as he was always for facts and did not care much about opinions.

"Of Wilks's veneration for Guy's Hospital no one can doubt when one reads the small volume published but a week or two ago under the kindly supervision of Sir Bryan Donkin. He was always ready to dwell upon the good work his school had done, and how it had ever been a pioneer along the road of medicine and surgery. This little book also shows the scrupulous regard he was wont to pay to the reputation of former workers in the various fields he traversed. Time and again he has been known to insist by speech and pen that in the matter of priority this or that one was in danger of being deprived of garments that of right belonged to him. Bright and Addison and Hodgkin and many another owe much to him and to his care that the work that he did should increase the stability of theirs; and so it was always to the very last. But it was perhaps in his familiar talks, in conversation, or the lecture theatre—for he still talked there—that he most of all appealed to his public, for there it was that his humour tumbled out in so unexpected and pleasant a way. Mr. Boyter Johnson, an old friend who knew him well, recalls that on rising to return thanks to his many hosts at the complimentary dinner to him on his being created a baronet, although greatly stirred by emotion, he commenced by saying that he had thought there were only two Samuels of repute—Samuel the Prophet and Sam Weller. Samuel Wilks had never occurred to him. There is another little specimen in his Reminiscences which one may extract. Speaking of alcoholic paralysis he says: 'Most of my examples were those of women, or, as I say, "ladies," for the patients were mostly wives of publicans and their husbands' landlords.' His shrewdness of observation may perhaps be indicated by the following episode, told also to Mr. Boyter Johnson. He was called one day to a noble mansion that excited his curiosity as to who the owner might be. He was unable to satisfy himself upon the point until, on leaving, the master of the house helped him on with his coat, and instead of the usual tug at the back that the footman gives he carefully adjusted it under the armpit. 'The man is a tailor,' said Wilks.

"One other characteristic may also well be recalled. He has been heard to say that most of his spare time was taken up by attending upon doctors and their families, and that it was always a matter of gratification to him that he was known as the doctors' doctor. Recollections of a man make but a poor picture, but they may suffice to show in barest outline how large-hearted a man our subject was, and, in some measure, why it was that he has passed away not only dear, to the last day of a ripe old age, to many friends and pupils—this might be the happy lot of a less manful and human spirit—but, to a depth beyond that, by all who knew him; he will have bidden farewell as he crossed the Bar with the hush of a most profound regard."

With these general expressions of esteem for the learning of Sir Samuel Wilks, and for the manly and stimulating qualities of his personality, we may be allowed to identify ourselves.

In 1854 Dr. Wilks married Elizabeth Ann, daughter of Henry Mockett, of Seaford, Sussex, and widow of his former preceptor, Mr. Richard Prior, M.R.C.S., of Newington. She died before him. Sir Samuel Wilks leaves no heir.

The funeral service was held in Hampstead Parish Church on Saturday, Nov. 11th. The body of Sir Samuel Wilks had been cremated that morning at Golder's Green, and the interment took place in Hampstead Cemetery. The chief mourners were Mrs. Allport (sister) and Mr. Ernest Wilks. The Royal College of Physicians of London was represented by Sir Thomas Barlow (President), Sir Dyce Duckworth, Dr. J. Mitchell Bruce, Dr. J. A. Ormerod, Dr. D. B. Lees, and Mr. W. Fleming; the Royal College of Surgeons of England by Mr. Rickman J. Godlee (President) and Mr. Clinton T. Dent (Vice-President); the Royal Society of Medicine by Sir Henry Morris and Mr. J. Y. W. MacAlister; the Governors of Guy's Hospital by Mr. H. Williams; the staff of Guy's Hospital by Dr. Frederick Taylor, Sir James Goodhart, Dr. G. H. Savage, Dr. Hale White, Dr. Newton Pitt, and Mr. Charters J. Symonds; and the Guy's Hospital Pupils' Physical Society by Mr. G. W. Goodhart. There were also present Sir William Osler, Sir John Rose Bradford, Sir William Bennett, Sir Shirley Murphy, Sir Bryan Donkin, Dr. E. F. Bashford, and the Mayor of Hampstead.

JOHN ALFRED COUTTS, M.B. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

Dr. J. A. Coutts, who died on Nov. 1st at Barnes, from pneumonia following influenza (as already stated), was the son of a prominent Tyneside shipbuilder, and was born in 1851. He was educated privately and at Emmanuel College, Cambridge, of which he was an exhibitioner. After graduating in the mathematical tripos he began to study medicine and entered St. George's Hospital. He qualified M.R.C.S. Eng. in 1881 and obtained the M.B. degree of his university in the following year. In 1884 he became a Member of the Royal College of Physicians of London, and in 1897 he was elected a Fellow. Dr. Coutts's long association with the East London Hospital for Children began in 1885 when he was appointed assistant physician; six years later he became full physician, and he held the latter post up to the time of his death. During his 26 years' work at Shadwell he became more and more identified with the study of pædiatrics, and established for himself a reputation as an excellent diagnostician and an authority on the literature of children's diseases.

In 1896 Dr. Coutts was Hunterian lecturer before the Royal College of Surgeons of England, and chose as the subject of his lectures "Some Aspects of Infantile Syphilis." He contributed several articles upon his special subject to Allchin's "Manual of Medicine" and to the "Encyclopædia Medica." He wrote well and often, but he seldom spoke in public. He was devoted to the East London Hospital, and his affection for it was returned by all who worked at Shadwell with him. His health was never strong, but he made the most of his physical powers, and throughout his life he was an enthusiastic student of athletics, being in particular a fine judge of rowing and oarsmanship. The news of his death after a very short illness came as a blow to his friends and patients, and his personality and work will long be remembered with affection.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are

announced:—Dr. P. Stuhr, professor of anatomy in the University of Würzburg.—Dr. Eyvin Wang, editor of the *Norsk Magazin for Lægevidenskaben*.—Dr. Alex. Hugh Ferguson, professor of clinical surgery in the Chicago College of Physicians and Surgeons.—Dr. Alfred Binet, director of the Laboratory of Experimental Psychology, Paris, aged 54.—Dr. Felix Löwenhardt, of Breslau, a surgeon well known for his operative ability in urinary diseases. He had been ill for a long period and unable to attend to his practice. His age was about 50.—Dr. R. Kroemer, director of the Conradstein Lunatic Asylum for West Prussia.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At a meeting of the Comitia of the Royal College of Physicians on Oct. 26th, and of the Council of the Royal College of Surgeons on Nov. 9th, Diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the under-mentioned gentlemen, who have passed the Final Examination in medicine, surgery, and midwifery of the Conjoint Examining Board, and have complied with the respective by-laws. The following are the names of the successful candidates:—

John Wroth Adams, St. Bartholomew's Hospital; Thomas Ewart Ashley, St. Bartholomew's Hospital; Charles Nelson Atlee, St. Mary's Hospital; Cuthbert Hastings Attenborough, King's College Hospital; Cecil Crees Austen, Westminster Hospital; *John Bruce Baird, B.Sc., M.B., Ch.B. Glasg., Otago and Glasgow Universities and King's College Hospital; John Bramley Ball, L.D.S. Eng., Guy's Hospital; John Hamilton Barclay, M.B., B.S. Durh., Durham University; Howell Wood Barnes, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Robert Campbell Begg, M.A., B.Sc. New Zealand, New Zealaand and Edinburgh Universities; Thomas Mulholland Bellew, Liverpool University; Bertie Blackwood, Leeds University and Guy's Hospital; Gilbert Alan Blake, Guy's Hospital; Richard Frank Bolt, Bristol University; Howard Bullock, M.B., Ch.M. Sydney, Sydney and Oxford Universities and Middlesex Hospital; Maurice Burnett, King's College and St. George's Hospitals; Lionel Charles William Cane, Guy's Hospital; Herbert Edward Cockcroft, Manchester University; Harold Alexander Cooper, M.B., B.S. Durh., Durham University; John Lloyd Davies, University College Hospital; Hubert Daw, Guy's Hospital; Lionel Montrose Dawson, M.D., C.M. Queen's University, Kingston, Kingston University and London Hospital; Evan Richard Evans, St. Bartholomew's Hospital; George Douglas Gordon Fergusson, St. Mary's Hospital; Frederick Thomas Fisher, Birmingham University; Philip Stanley Foster, M.B., Ch.B. New Zealand, New Zealand University and London Hospital; Frank Garratt, University College, King's College, and St. George's Hospitals; Lister Gibbons, M.D. Buffalo, Buffalo University, London and St. Mary's Hospitals; Aubrey Scott Gillett, King's College Hospital; Ernest Franz Waldemar Grellier, Cambridge University and St. George's Hospital; James Bennett Hance, B.A. Cantab., Cambridge University and Guy's Hospital; *Robert Coltart Harkness, M.B., Ch.B. Edin., Edinburgh University; Walter Parker Harrison, L.D.S. Eng., Charing Cross Hospital; John Rippiner Heath, B.A. Cantab., Cambridge and Birmingham Universities; Ashley Ernest Herman, B.A. Cantab., Cambridge University and London Hospital; John William Wynne Hogan, Madras University and St. Bartholomew's Hospital; George Ashby Hooton, St. Bartholomew's Hospital; Abd El Aziz Ismail, M.D. Cairo, Cairo and St. Thomas's Hospital; Ah Chit Jap, Guy's Hospital; *Victor Stanley Kaufman, M.B. Toronto, Toronto University and London Hospital; Robert Kennon, M.B., Ch.B. Liverp., Liverpool University; George Eric Warner Lacey, Guy's Hospital; William Morgan Langdon, Guy's Hospital; †Ernest Millington Livesey, M.B., B.S. New Zealand, New Zealand University; David Charles Lloyd, Liverpool University and Guy's Hospital; George Carter Lowe, Guy's Hospital; Nagib Mahrus, Cairo and London Hospital; Charles Edward Hamilton Milner, King's College Hospital; Patrick John Monaghan, Guy's Hospital; Reginald Sperling Morshead, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Satyen Mozumder, St. Bartholomew's and Middlesex Hospitals; Marwood Mintern Munden, Guy's Hospital; William Marshall Oakden, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Bernard Rayne Parmiter, Guy's Hospital; Hugh Pierce, Liverpool University; Reginald Edward Porter, London Hospital; Thomas Conrad Reeves, London Hospital; *Henry Goulding Rice, B.A. Cantab., Cambridge University and Guy's Hospital; James Freer Richardson, London Hospital; Harrolde Bedford George Russell, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Wilfred Alan Russell, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Laurence Lancaster Satow, St. Bartholomew's Hospital; Henry Wakeman Scott, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Hew William Scott-Wilson, Oxford University and London Hospital; Ahmad Shafeek, Cairo and St. Thomas's Hospital; George William Shore, King's College Hospital; Thomas Henry Gostwyck Shore, Cambridge University and St. Bartholomew's Hospital; Alfred Bernard Pavey Smith, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Alan Richmond Snowdon, St. Bartholomew's Hospital; Harry Stobie, L.D.S. Eng., Charing Cross and St. Thomas's Hospitals; William Albert Stokes, B.A. Cantab., Cambridge and Birmingham Universities; Dudley Macaulay Stone, St. Mary's and St. Bartholomew's Hospitals; Elliott John Storer, St. Bartholomew's Hospital; James Llewellyn Montfort Symns, B.A. Cantab., Cambridge University and Guy's Hospital; Charles Joseph Gordon Taylor, B.A. Oxon., Oxford University and London Hospital; Julian Taylor, University College Hospital; John Wilson Tonks, B.A. Cantab., Cambridge University and University College Hospital; Percival Dillon Warburton, Sheffield University; John Wells Whiteman, Bristol University and Middlesex Hospital; John Helby Wilkinson, London Hospital; Thomas Davies Williams, London Hospital; James Ernest Studholme Wilson, London Hospital; Cecil Charles Worster-Drought, B.A. Cantab., Cambridge University and Guy's Hospital; and Frederick Cecil Wright, St. Bartholomew's Hospital.

* Diploma of M.R.C.S. previously conferred on Oct. 12th.

† Diploma of M.R.C.S. alone conferred.

The Council also conferred the Licence in Dental Surgery upon Donald Henry McDonald, Charing Cross and Royal Dental Hospitals, who has now complied with the by-laws for such licence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the Primary Examination for the Fellowship in Anatomy and Physiology held on Nov. 2nd, 3rd, 7th, 8th, 9th, and 10th, 127 candidates presented themselves, of whom 32 were approved and 95 were rejected. Among the successful candidates was one lady—Miss E. A. Ashby, of Birmingham University. The following are the names of the successful candidates:—

Gerald Graham Alderson, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and University College and St. Thomas's Hospitals; Arthur Beeny Appleton, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Elizabeth Labrey Ashby, Birmingham University; Gerald Waddington Beresford, M.R.C.S., L.R.C.P., London Hospital; Edmund Boyd, B.A., M.B. Toronto, L.R.C.P., M.R.C.S., Toronto University and Middlesex Hospital; Gordon Normanby Brandon, M.R.C.S., L.R.C.P. St. Thomas's Hospital; Robert Markham Carter, Captain I.M.S., M.R.C.S., L.R.C.P., D.T.M. Liverp., St. George's and King's College Hospitals; James Clark, M.D., Ch.B. Aberd., M.R.C.P., D.P.H., Aberdeen University and King's College; Raymond John Clausen, University College Hospital; Arthur Rawdon Carrington Doorly, St. Thomas's Hospital; Philip Geoffrey Doyne, B.A. Oxon., Oxford University and St. Thomas's Hospital; William Gilliatt, M.D., B.S. Lond., M.R.C.S., L.R.C.P., Middlesex Hospital; John Richard Griffith, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Thomas Sydney Shaw Holmes, M.B., B.Ch. Belfast, Belfast and London Hospital; Henry Julyan Hoyte, King's College; John Kennedy, M.D., B.S. Melb., Melbourne University and Middlesex Hospital; Henry Rylands Knowles, Leeds University; Archibald Campbell Magarey, M.B., B.S. Adelaide, M.R.C.S., L.R.C.P., Adelaide University and St. Mary's Hospital; Nanalal Maganlal Mehta, L.M.S. Bombay, Bombay University and Middlesex Hospital; Hubert Lewis Clifford Noel, M.R.C.S., L.R.C.P., London Hospital; Vernon Charles Pennell, B.A. Cantab., Cambridge University and St. Thomas's Hospital; John Lansdowne Perceval, Guy's Hospital; Maurice Nasmith Perrin, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Julian Lionel Priston, London Hospital; Martin Owen Raven, B.A. Oxon., Oxford University and St. Mary's Hospital; Henry Goulding Rice, B.A., B.C. Cantab., M.R.C.S., L.R.C.P., Cambridge University and Guy's Hospital; Walter Salisbury, Bristol University; Wilburn Smith, M.R.C.S., L.R.C.P., Jefferson Medical College and King's College; Arthur Hughes Southam, B.A. Oxon., Oxford and Manchester Universities and London Hospital; Harold Foster Strickland, M.R.C.S., L.R.C.P., L.D.S., Charing Cross and Middlesex Hospitals; Geoffrey Viner, M.D. Lond., St. Bartholomew's Hospital; and Ivan Stuart Wilson, M.D., M.B., Ch.B. New Zealand, M.R.C.S., L.R.C.P., New Zealand University and London Hospital.

At the First Professional Examination for the Licence in Dental Surgery held this month the following candidates were approved in the subjects indicated below:—

Mechanical Dentistry and Dental Metallurgy.—Arthur Wilfrid Adams, Bristol University; Leslie Alabone and Arthur James Barber, Guy's Hospital; Philip Blake, Royal Dental Hospital; Alfred Allwright Brown, William Allen Bulleid, Stephen Walter Coffin, and Louis Charles Cohen, Guy's Hospital; Walter Tyrrell Cooper, Royal Dental Hospital; Walter Alexander Crane, Liverpool University; George Lambert Cutts, Guy's Hospital; Arthur Thomas Dally, Royal Dental Hospital; Arnold Thomas Densham, M.A., B.C. Cantab., M.R.C.S., L.R.C.P., Guy's Hospital; James Douglas Dimock, Royal Dental Hospital; Ernest Francis Doubleday, Birmingham University; Cyril Henry Edwards, Guy's Hospital; Reginald Fox, Liverpool University; William Henry Churchill Gordon, Guy's Hospital; Percy Gordon Barlow Griffin, Liverpool University; Alan Basil Hacking and Arthur James Horniblow, Royal Dental Hospital; Philip Hutson, National Dental Hospital; Bernard Isaacs, Edward Eastaugh Johnson, Archibald Daniel Marston, Harry Millett, and Frederick Humble Morrell, Guy's Hospital; Harold Robert Parkes, Liverpool University; Edward Pitt, D.D.S. Pennsylvania, Pennsylvania University; Reginald Harry Rix, Guy's Hospital; Stephen Archibald Rodda, Royal Dental Hospital; Alan Filmer Rook and Ernest Charles Rycroft, Guy's Hospital; Thomas William Stark, Royal Dental Hospital; Cecil Ernest Thomas, Guy's Hospital; Harold Treleaven, Royal Dental Hospital; Percy James Wakley, Birmingham University; William Thomas Williams, Liverpool University; and Paul Bernard Wood, Royal Dental Hospital.

Mechanical Dentistry.—Sidney Adams, Guy's Hospital; Ronald William Anderson-Jardine and Carl William Reeves Bater, National Dental Hospital; Vincent Clifford Carrington, Sheffield University; Henry James Cavanagh, National Dental Hospital; Frederick Scott Cooper, Leeds University; William John Curtis, Royal

Dental Hospital; Wilfred Angel Easton, Guy's Hospital; Francis Malcolm Timothy Flintan, Royal Dental Hospital; John Langley Garrard and Walter Henry Glover, Guy's Hospital; Melville St. Clair Hamilton and Hubert Humphrey, Royal Dental Hospital; Aubrey Thomas Madin, Birmingham University; Arthur Helmuth John Miller, Royal Dental Hospital; Wallis John Milton, Bristol University; Norman Mulliner, Liverpool University; Gustavus Leigh Pemberton, Guy's Hospital; Alan Douglas Edward Shefford, National Dental Hospital; and Robert William Spong and Leonard Duncan Windemer, Guy's Hospital.

Dental Metallurgy.—Alexander Douglas Ball, Royal Dental Hospital; Harold Bridgwater Bramley, Liverpool University; Debenham Stuart Coombs and Frederick Andrew Craine, Royal Dental Hospital; Herbert James Edwards, Guy's Hospital; Frank Keith Hayman, Bristol University; Walter Owen Hughes, Liverpool University; Reginald John Inder, National Dental Hospital; Launcelot Machin, Guy's Hospital; Charles Wyndham Martin and Alan Edward Meeson, Liverpool University; Alan Lawrence Miller, Birmingham University; Frederick James Neal Guy's Hospital; Winifred Amelia Oaten, Royal Free and National Dental Hospitals; Clifford Thomas Plimsoll, Royal Dental Hospital; William Earle Starkey, Liverpool University; Stanley Stevens, Guy's Hospital; Norman David Swayne Straton, Royal Dental Hospital; Frederick Edward Alan Thorman, Birmingham University; and Thomas Huddlestone Urwin, Durham University.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Hagenbach-Burckhardt, Professor of Pædiatry, will retire at the close of the current winter session.—*Berlin:* Dr. Georg Axhausen has been appointed Oberarzt of the Surgical Clinic of the Charité, in succession to Dr. Pels Leusden.—*Bonn:* Dr. F. Heiderich, Extraordinary Professor in Göttingen, has been appointed Extraordinary Professor of Anatomy, in succession to Dr. Schiefferdecker. Dr. Alfred Machol, *privat-docent* of Surgery, and Dr. Hugo Selter, *privat-docent* of Hygiene, have been granted the title of Professor.—*Breslau:* Dr. Ludwig Tobler, of Heidelberg, has declined the offer of an Extraordinary Professorship at Bonn, but has been appointed to the chair of Pædiatry in Breslau, in succession to Dr. Freiherr von Pirquet, who is going to Vienna. Dr. J. Strasburger, *privat-docent* of Medicine in Bonn, has been appointed Extraordinary Professor of Medicine, in succession to the late Dr. R. Stern.—*Budapest:* Dr. Aladár Fischer has been appointed Surgical Primararzt in the Adele Bródy Children's Hospital, in succession to the late Dr. Jonas Baron.—*Burlington (University of Vermont):* Dr. F. U. Albee has been appointed to the chair of Orthopædic Surgery.—*Clausenburg (Kolosvár):* Dr. Nikolaus Jancsó has been appointed to the chair of Medicine, in succession to Dr. S. Purjesz, retired.—*Dresden:* Dr. Kehrer, of Berne, has been appointed Director of the Obstetric and Gynæcological Clinic, in succession to the late Dr. Leopold.—*Greifswald:* Dr. Pels Leusden, of Berlin, has accepted the chair of Surgery, in succession to Dr. König.—*Grenoble:* Dr. Jacquemet has been appointed Professor of Medical Pathology.—*Innsbruck:* Dr. Hans Rabl, of Vienna, has accepted the chair of Histology in succession to the late Dr. Kerschner.—*Naples:* Dr. A. Bevacqua has been recognised as *privat-docent* of Pathological Anatomy.—*New Orleans (Tulane University):* Dr. Creighton Wellman has been appointed to the chair of Hygiene.—*Philadelphia (University of Pennsylvania):* Dr. Howard Fussell has been appointed Professor of Hygiene.—*Rouen:* Dr. Guerbet has been appointed Professor of Materia Medica.—*Stuttgart:* Dr. Heinrich Schmidt, assistant in the Medical Clinic at Tübingen, has been appointed Oberarzt of the Katherine Hospital.—*Toronto:* Dr. Graham has been appointed lecturer on Bacteriology.

THE MEDICAL PROFESSION AND MUNICIPAL HONOURS.—The following are the names of the medical men who have so far been announced as having been elected or re-elected to the headship of their corporations:—London: Sir Thomas B. Crosby, M.D. St. And., F.R.C.S Eng. (Lord Mayor). Barnstaple: Mr. J. R. Harper, M.R.C.S. Eng., L.R.C.P. Lond. Bolton: Mr. J. Young, M.R.C.S. Eng., L.R.C.P. Lond. Congleton: Mr. W. J. Fern, L.R.C.P. Irel., L.R.C.S. Edin. Exeter: Mr. C. J. Vlieland. M.D. Durh., M.R.C.S. Eng., L.S.A. Faversham: Mr. S. R. Alexander, M.D. Lond., M.R.C.S Eng., L.S.A. (re-elected). Hartlepool: Mr. W. S. Gibb, M.B., C.M. Edin. (re-elected). Hertford: Mr. J. Burnett Smith, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S. Glasg. Leamington: Mr. H. Mason, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond. (re-elected). Lewes: Mr. H. Stott, M.R.C.S Eng., L.R.C.P. Lond., L.S.A. Montgomery: Mr. N. W. Fairless-Humphreys, M.R.C.S. Eng., L.S.A. (re-elected). Newport (Mon.): Mr. J. McGinn, F.R.C.S. Irel., L.R.C.P. Edin., L.F.P.S. Glasg. Pwllheli: Mr. O. W. Griffith, L.R.C.P. & S. Edin. Saffron Walden: Mr. J. P. Atkinson, M.D. Glasg., L.R.C.P. Lond., L.R.C.S. Edin. (re-elected). Wallasey: Mr. J. Oldershaw, M.D. Brux., L.R.C.P. Irel., L.R.C.P. & S. Edin., L.F.P.S. Glasg. Warrington: Mr. C. W. Joseph, M.D. Durh., L.R.C.P. Irel., M.R.C.S. Eng., L.S.A. (re-elected). Wimbledon: Surgeon-Major E. L. McSheehy, A.M.D. (ret.), M.D., M.Ch. R.U.I., F.R.C.S. Irel.

Dr. William Arthur Brailey, consulting ophthalmic surgeon to Guy's Hospital, and a former Fellow of Downing College, has been elected to an honorary Fellowship at Downing College, Cambridge.

THE DEATH OF DR. W. P. MARSHALL.—We greatly regret to report the death of this young and promising physician under tragic circumstances. On the afternoon of Nov. 10th, Dr. Marshall was walking with his wife, to whom he had been married only a few months, across the swing bridge which spans the Ship Canal at Old Trafford. A heavy motor-lorry was crossing at the time, and for some unexplained cause it suddenly swerved and pinned Dr. Marshall against the iron framework of the bridge. The result was such serious internal injuries that he died in Salford Hospital three days later. Dr. Marshall was the only son of the president of the Baptist College, Rusholme, and he took his degrees in medicine three years ago at the University of Manchester.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general or quarterly meeting of this association will be held at 3 o'clock on Tuesday, Nov. 21st, at 11, Chandos-street, Cavendish-square, London, W., under the presidency of Dr. W. R. Dawson. At 4 o'clock, during the same afternoon, the meeting will be resolved into a joint session with the Section of Obstetrics and Gynæcology of the Royal Society of Medicine (of which section Dr. Amand Routh is president), when a discussion will be invited upon a paper dealing with Amenorrhœal Insanity by Dr. C. T. Ewart. A paper by Dr. Geoffrey Clarke on Sterilisation from the Eugenic Standpoint will also be read and discussed. Members will subsequently dine together at the Café Monico Restaurant at 7 P.M. Cost of dinner 7*s.* 6*d.*, exclusive of wine. Evening dress optional. All communications should be made to Dr. C. Hubert Bond, honorary general secretary, 11, Chandos-street, Cavendish-square, London, W.

THE VAGRANCY QUESTION.—It is a matter of much gratification to the boards of guardians in Sussex that the vagrancy returns are showing a great decrease. The way-and-food ticket system was introduced into the county at the latter end of 1906, at which time Mr. J. S. Davy, who was then the Local Government Board inspector for the district, took great interest in it, but it was some years later ere the scheme became practically general throughout the county, Brighton coming in in 1909. The aims of the system are: (1) Assistance for the genuine workman in search of employment; (2) decrease in the number of professional beggars and habitual vagrants; (3) the support of the general public by informing them that there is no necessity for the indiscriminate giving of alms to wayfarers. As proof of the success of the system the Steyning Union, one of the largest unions in the county, provides some remarkable figures covering the year just completed. The number of vagrants dealt with at the workhouse of that union was 4810 in 1908, whereas the number in 1911 was only 1103 (898 men, 152 women, and 53 children). The way bills, bread and cheese tickets, and bread tickets diminished from 2180 to 508 in the same period. These figures show that the "in-and-outs" of our workhouses dislike the system and that they have been driven out of Sussex—into Surrey one guardian suggested at the recent board meeting. But why cannot the system become a general one all over the country? If it were so the tramping fraternity would soon find that their mode of life was receiving a very serious check everywhere, and not in a single district or districts, and that instead of the present administration of the Poor-law offering them encouragement in their habits it was proving to be an obstacle difficult of negotiation. The system is deserving of success because its working differentiates between the genuine working man and the real loafer.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

SEVERAL matters of deep interest to the medical profession were discussed by the House of Commons in connexion with the National Insurance Bill. As briefly recorded last week, the Government on Wednesday, Nov. 8th, brought forward amendments extending the size of the Local Health Committees and giving a preponderating representation on those committees to the Friendly Societies and the deposit contributors. Sir PHILIP MAGNUS made a vigorous protest against the change. He said that in the amendment which he had understood was accepted by the Chancellor of the Exchequer, the representation of the medical profession on the Health Committees was to have been 3 out of a maximum of 30. It had now been reduced without consultation with anyone to 3 out of a maximum of 80. He felt quite certain that the members of the medical profession would regard that as nothing less than the betrayal of their interests, and it certainly must be regarded, unless some explanation could be given, as a breach of faith. It was understood that part of the duties of the Health Committees would be to collect statistics of health conditions in the neighbourhood and to draw inferences from those conditions. That was not an easy matter, but it required some amount of scientific knowledge and experience.

Sir ROBERT FINLAY said that one of the points which the medical profession had always considered vital was that the control of the medical arrangements should not be committed to the Friendly Societies. It was arranged with the medical men that the control should not be with the Friendly Societies but with the Health Committees. The increase of the size of the Health Committee was simply part of an arrangement for, under another name, sending back the control of the medical arrangements to the Friendly Societies, from whom it was to be withdrawn.

Mr. LLOYD GEORGE, at a later stage, said that it was in the interests of the insured persons, of the medical men, and of every class of the community that there should be larger rather than smaller committees.

Mr. H. W. FORSTER: I do not suppose there would be any objection so long as the proportion which the doctors understood they were to have on the old committee is maintained.

Mr. LLOYD GEORGE: There was no question of proportion at all. The doctors asked for two and one, but nothing was said about proportion.

Sir ROBERT FINLAY at a later stage remarked that it was a vital point with the doctors that the control of the medical benefit should not rest with the Friendly Societies, and it had been understood that that was conceded by the Chancellor of the Exchequer.

Mr. LLOYD GEORGE: Does the right honourable gentleman say that I agreed with the medical profession that the Government should not give a majority on the Local Health Committee to approved societies?

Sir ROBERT FINLAY: That is another point altogether. What I was saying was that the Chancellor of the Exchequer was understood to have agreed with the medical profession that the control of medical benefit should not rest with the Friendly Societies. If I am wrong I will be glad to be corrected.

Mr. LLOYD GEORGE: It is important that there should be no possible mistake about this. What I did agree to and what is now provided by the Bill as amended was that the Local Health Committee should have the control of medical benefit save in existing rights. That is already incorporated in the Bill. I certainly never agreed to anything but that the majority of the committee should be elected by the insured persons.

Sir ROBERT FINLAY: The right honourable gentleman has really not in any way qualified what I have said. I do not think that he has made it all clear. What I said was—and the fact remains uncontradicted—that the right honourable gentleman agreed with the medical men that the control of the medical benefit should not rest with the Friendly Societies but with the Health Committees. We are now told that medical benefit should not rest with Friendly Societies but with a majority of the Health Committee representing insured persons. That is precisely the same thing.

Mr. LLOYD GEORGE: This is a question which involves, if I may say so, a matter of faith between the medical profession and myself. What I understood the right honourable gentleman to say was that I agreed that the control of medical benefit was to be left to the Local Health Committee and not the Friendly Societies. I want to make it clear that that did not involve, as the right honourable gentleman now puts it, that I agreed that the control should be with the Local Health Committee and not the majority of the insured persons.

Sir ROBERT FINLAY: The right honourable gentleman propitiated a great many medical men who thought the pledge would be observed in the spirit as well as the letter. Now it turns out that by manipulation of the Health Committee the control is to be given to the insured persons—namely, the Friendly Societies and the deposit contributors

Mr. LLOYD GEORGE: Does the right honourable gentleman sugges that a breach of faith is involved in giving a majority on the committee to the insured persons? If he does, will he quote a single note or any statement made to a responsible medical man in which I said that the control was to be given to the Local Health Committee without having regard to the majority of insured persons being represented?

Sir ROBERT FINLAY: The right honourable gentleman certainly never told the medical men that such a change as this was going to be made in the constitution of the Health Committee, and if he had told them they would not have been so satisfied as they were at the time. What I do say was that this change vitally alters the conditions on which the medical men were disposed to be satisfied with what the right honourable gentleman said. The right honourable gentleman has transformed at the last moment the composition of the Health Committee. He has transformed it by increasing the number to 80 from 22, and whereas the medical men were necessarily to have 2 out of the 22, out of this maximum of 80, which the amendment proposes, they are entitled necessarily only to 3. That is a totally different state of things from what the medical men thought they had got. The fact that an amendment of this kind was in contemplation ought to have been revealed to the medical profession when they accepted the statements of the Chancellor of the Exchequer. The truth is that the Chancellor thinks he has made his peace with the Friendly Societies and at the expense of the medical representatives who had trusted to what they understood he said. I make no apology for referring to this matter at some little length, because the coöperation of the medical men is absolutely essential to the working of this Bill. I am very much mistaken if the feeling in the profession is not that in this matter it has not been treated fairly.

Dr. C. ADDISON said that the version of the right honourable gentleman, the Member for Edinburgh and St. Andrews Universities (Sir ROBERT FINLAY), had been given somewhat under a misapprehension. The medical men fully realised that the representatives of insured persons should be in a majority on these committees, and they never, so far as he knew, at any time demurred to that proposition. What they were anxious for was that their case should be properly and fairly stated before these committees. So far as that went, he quite recognised that the alteration of the numbers of the committees did make a very material difference in the position as it stood originally and when the arrangement was originally made. The medical men believed that their case was strong enough to stand its ground, but they were anxious that it should be considered without prejudice as far as possible, and as this amendment introduced a material alteration he would ask the Chancellor of the Exchequer to assure the House that, so far as the precise numbers were concerned, he did not commit himself finally, but would leave it open for representations to be made before the report stage to see whether the profession was satisfied with this alteration, which perhaps it had not yet had full opportunity to consider. The medical profession was perfectly satisfied that it had a good case. All that he wanted was to have it fairly stated, and he would ask the right honourable gentleman, in view of the altered circumstances, to give the profession an opportunity of making representations before the report stage if it wished to do so.

The clause was amended in the terms indicated in THE LANCET of Nov. 11th.

It was also agreed to make provision for the appointment of auxiliary Health Committees. It is now laid down in the clause that the regulations made by the Insurance Commissioners "shall require the Local Health Committee of every county (except in cases where, owing to special circumstances, the Commissioners consider it unnecessary) within six months after the commencement of this Act to prepare and submit for approval to the Commissioners a scheme for the appointment of an auxiliary committee for the county and prescribing the area to be assigned to each such committee, and in particular the scheme shall provide for the appointment of an auxiliary committee for each borough (including the City of London and a metropolitan borough) within the county having a population of not less than ten thousand, and for each urban district within the county with a population of twenty thousand, unless the Local Health Committee consider it expedient in the case of any such borough or urban district that there should not be a separate auxiliary committee for the borough or urban district, or that any adjoining areas should be grouped with such borough or urban district for the purpose of the appointment of an auxiliary committee." Clause 44 (Powers and Duties of Local Health Committees) was passed without discussion under the closure resolution.

The Excessive Sickness Clause.

Some interesting speeches were delivered on Thursday, Nov. 9th, when Clause 46, which deals with excessive sickness in a locality, was considered. The object of the section is to throw upon local authorities, house owners, and employers the liability to make good the cost of excessive sickness in a district attributable to bad housing, insanitary conditions, or contaminated or insufficient water-supply. A general debate took place on the question whether the approved Societies and Local Health Committees should have their powers limited to insurance matters so far as possible or whether they should have power over Local Government matters.

The Chancellor of the Exchequer made a very spirited defence of the

proposals of the clause. He contended that it set up machinery not for interfering with the local authorities, but to enable the societies which were damnified by the inaction, the illegal action, or the neglect of authorities, owners, or employers, to carry out the provisions of the law. What were the main complaints of the Friendly Societies with regard to the extra causes of ill-health which added to their expenditure? They were bad drainage, bad water-supply, bad housing, factories not in accordance with the conditions of the law. The offenders were local authorities and private individuals. There had been years of Public Health Acts in this country and local government inquiries without number. There had been recommendations of medical officers of health and inspectors of the Local Government Board. He was able to prove that they were absolutely helpless in hundreds of cases and had been so for years, not because the Local Government Board had neglected its duty. It was purely because it was armed with the clumsiest, rustiest weapon in the whole armoury of British law—the *mandamus*, a perfectly worthless weapon. He would read to the House an extract from the pen of the chief medical officer of the Local Government Board in his review for the year 1909. He said: "A story of neglect of elementary sanitary work outstands in a large proportion of the current reports by medical inspectors of the Board on local sanitary circumstances. A not inconsiderable number of the smaller towns and urban districts and many of the rural districts which have within their area portions presenting urban characteristics are characterised by continuance, more or less, of the filth nuisances which were fairly general 50 years ago, but which have since then been abolished in the larger and better governed towns."

If anyone would go through these reports, Mr. LLOYD GEORGE continued, he would find that there were local authorities by the score which never prosecuted offenders against the Public Health Act, which kept no records and never even investigated insanitary conditions, which had no sanitary committee, which systematically refused to carry out the recommendations of their sanitary officials, which had in force neither by-laws nor adoptive Acts, and which neglected to apply such by-laws and Acts when adopted. So far from interfering with any existing authorities, he simply proposed to assist them to put the law in force. The clause would be of enormous value to the Local Government Board. Instead of threatening to issue a *mandamus* it would be able to say to a local authority, "Well, if there is an epidemic you will be mulcted in damages." The clause would be a help to county councils, who had general supervision over health all over the country. It would be of enormous benefit to the medical officers of health of counties, who were practically powerless. All that they could do was to expose the evil. Their position was a very difficult one. They had often to report upon insanitary conditions when the proprietors of the properties were strongly represented on these councils. He had a letter last week from a medical officer of health who gave his name and address. He said to him: "It is as much as my place is worth to report faithfully on the conditions prevailing." So far from causing overlapping and weakening, the clause was a source of strength. He wanted to make insanitary property and neglect of public duties unremunerative.

Some doubt was afterwards expressed whether the Chancellor of the Exchequer was adopting the best method to deal with authorities and persons who neglected to enforce sanitary laws. One suggestion was to the effect that in cases of default the county council should have power to enter and do the necessary work. Another was to increase the powers of the Local Government Board.

However, the clause was carried, after the introduction of some amendments. Owing to its importance the essential part of it may be reproduced in its amended form. It is as follows:—

"1. Where it is alleged by the Insurance Commissioners or by any approved society or Local Health Committee that the sickness which has taken place among any insured persons being, in the case where the allegation is made by a society or committee, persons for the administration of whose sickness and disablement benefits the society or committee is responsible, is excessive, and that such excess is due to the conditions or nature of employment of such persons, or to bad housing or insanitary conditions in any locality, or to a defective or contaminated water-supply, or to the neglect on the part of any person or authority to observe or enforce the provisions of any Act relating to the health of workers in factories, workshops, mines, quarries, or other industries, or relating to public health, or the housing of the working classes, or any regulations made under any such Act, or to observe or enforce any public health precautions, the Commissioners or the society or committee making such allegation may send to the person or authority alleged to be in default a claim for the payment of the amount or any extra expenditure alleged to have been incurred by reason of such cause as aforesaid, and if the Commissioners, society, or committee and such person or authority fail to arrive at any agreement on the subject may apply to the Secretary of State or the Local Government Board, as the case may require, for an inquiry, and thereupon the Secretary of State or Local Government Board may appoint a competent person to hold an inquiry.

2. If upon such inquiry being held it is proved to the satisfaction of the persons holding the inquiry that the amount of such sickness has—(i) during a period of not less than three years before the date of the inquiry; or (ii) if there has been an outbreak of any epidemic, endemic, or infectious disease, during any less period—been in excess of the average expectation of sickness by more than 10 per cent., and that such excess was in whole or in part due to any such cause as aforesaid, the amount of any extra expenditure found by the person holding the inquiry to have been incurred under this part of this Act by any societies or committees where the allegation is made by the Insurance Commissioners, or if the allegation is made by a society or committee, by the society or committee in question, by reason of such cause shall be ordered by him to be made good in accordance with the following provisions: (*a*) where the excess of such part thereof as aforesaid is due to the conditions or nature of the employment or to any neglect on the part of any employer to observe or enforce any such Act or regulation as aforesaid, it shall be made good by the employer; (*b*) where such excess or such part thereof as aforesaid is due to bad housing or insanitary conditions in the locality, or to any neglect on the part of any local authority to observe or enforce any such Act or regulation as aforesaid, it shall be made good by such local authority as appears to the person holding the inquiry to have been in default; or if due to the insanitary condition of any particular premises shall be made good by the owner or occupier of the premises who is proved to the satisfaction of the person holding the inquiry to be responsible; (*c*) where the excess or such part thereof as aforesaid is due to an insufficient or contaminated water-supply it shall be made good by the local authority or company by which the water is supplied, or which having imposed upon it the duty of affording a water-supply has refused or neglected to do so, unless the local authority or company prove that such insufficiency or contamination was not due to any default on the part of the authority or company, but arose from circumstances over which it had no control."

There are several other subsections of the clause, but they relate to procedure and machinery.

Sanatoriums.

Clause 47, which relates to the erection of sanatoriums, was also passed with several amendments. On the motion of Mr. LLOYD GEORGE words were inserted to enable county councils to manage and maintain sanatoriums (as well as to erect them as provided by the clause), and for that purpose to make arrangements with Local Insurance Committees and other authorities. It was also agreed to insert the following new subsection: "A Local Health Committee may, with the consent of the Insurance Commissioners, enter into agreements with any person or authority that, in consideration of such person or authority providing treatment in a sanatorium or other institution or otherwise for persons recommended by the committee for sanatorium benefit, the committee will contribute out of the funds available for sanatorium benefit towards the maintenance of the institution or provision of such treatment, such annual or other payment, and subject to such conditions and for such periods as may be agreed, and any such agreement shall be binding on the committee and their successors, and any sums payable by the committee thereunder may be paid by the Insurance Commissioners and deducted from the sums payable to the committee for the purposes of sanatorium benefit."

Scotland and the National Insurance Bill.

As the result of the amendment of the clause applying the National Insurance Bill to Scotland, a separate National Insurance Commission is to be set up for that country and also a national fund. County councils have been given the power to set up approved societies in districts where no organisation of the kind exists Local Health Committees have also been given power to modify or suspend certain benefits and give their equivalent in other benefits in districts where the conditions render this course advisable. Several honourable Members spoke in appreciation of the work of medical men in the remote Highlands and Islands of Scotland. It was suggested that a mileage rate should be paid to them. The Chancellor of the Exchequer recognised the importance of this problem, but pointed out that the amended clause might permit arrangements to be made in favour of these medical men.

Ireland and the National Insurance Bill.

Extensive changes have been introduced into Clause 59 of the National Insurance Bill (which applies the measure to Ireland). There is to be a separate insurance fund for Ireland, and a separate Insurance Commission will be set up for that country. Medical benefits have been eliminated from the Bill so far as it affects Ireland, and certain modifications have been introduced into the constitution of the Local Health Committees. The debate on the Irish clause extended over Tuesday, Nov. 14th, and Wednesday, Nov. 15th. On the latter day Mr. LLOYD GEORGE moved a long amendment, a portion of which was to the following effect:—"An insured person in Ireland shall not be entitled to medical benefit under this part of this Act, and the provisions with respect to medical benefit shall not apply; Provided that medical benefit for an insured person being a member of an approved society shall be deemed to be included amongst the additional benefits specified in Part II. of the Fourth Schedule to this Act." The excision of the medical benefit was accompanied by a diminution of contributions.

In some quarters of the House some misgivings were expressed at the decision to remove the medical benefit from Ireland. Mr. DILLON

for instance, admitted that whilst public opinion in that country was in favour of excision of medical benefit, he hoped that the day was close at hand when it would be adopted. Mr. BIRRELL, the Chief Secretary to the Lord Lieutenant, spoke in a somewhat similar strain. He described to the House the conditions under which the poorer classes in Ireland received medical attendance from the dispensary doctors. These gentlemen, 810 in number, received a salary averaging about £160 or £170 per annum, but they had also the right of private practice. Last year 479,644 cases were attended to by these medical men at the dispensaries and 163,115 cases at the private houses of the patients, and the cost of the service, which fell about equally on the rates and the local taxation fund, was £193,153. Personally he regretted that the medical benefit was to be struck out of the Bill in favour of the retention of the dispensary system, but he thought that public opinion in Ireland was already veering round on this question. He hoped as time went on that the dispensary system might be removed and the salaries of these medical men largely increased by their being able to come under the Bill on some reasonable basis. The right honourable gentleman acknowledged the excellent work done by the dispensary doctors, whom he characterised as "as decent and kind-hearted a set of men as were to be found in the United Kingdom."

Sir JOHN LONSDALE asked the Chief Secretary whether these medical men would receive a fee for furnishing such medical certificates as might be necessary for the purposes of the administration of the benefits still to be given under the Bill. Mr. BIRRELL replied that the dispensary doctor would be entitled to the same fee as any other medical man.

Dr. C. ADDISON, whilst he admitted that the change was being made in response to opinion in Ireland, deplored the step. He pointed to the very large number of uncertified deaths in that country as evidence that great improvement in the organisation of medical aid was to be desired. The present system could not, in his view, lead to the prevention of disease in the same way as the Bill with medical benefit in it would do. Sick pay and medical benefit were as a scientific arrangement inseparably associated. A vital objection to the excision of medical benefit in Ireland was that the ultimate success of the scheme depended on the development of preventive medicine. Sir E. CARSON suggested that the question of medical benefits for Ireland should be made the subject of further consideration.

The Chancellor of the Exchequer stated that he regretted leaving out medical benefit for Ireland, but the change was being made in deference to the wishes of the people in that country. However, if there was a feeling in Ireland that medical benefit should be included in the Bill he would not resist it on behalf of the Government. The matter was not an actuarial question, but was one of bargaining with the medical profession. He did not find that the Irish medical men were easier to bargain with than the English. If the Members from Ireland could make some arrangement with the medical profession in that country he would not resist a proposal to recommit the Bill in regard to the question of the medical benefit. Mr. M. HEALY, intervening, suggested that an option might be given to districts to adopt the medical benefit, but Mr. LLOYD GEORGE put aside the suggestion on the ground that it would be fatal to the finance of the Bill. He was inclined to agree, he proceeded to say, that eventually Ireland would come in for the whole of the benefits. What he thought would happen would be this. A great many workmen in Ireland objected to going to dispensary doctors because they thought that their action in doing so carried a suspicion of pauperism. He was told that that was the case in respect to the Belfast and Cork workmen. He anticipated that such workmen would join societies which for an increased contribution gave medical benefit. But they would lose the employer's contribution. Members from Ireland would then press Parliament for an extension of the full benefits to their country. Sir JOHN LONSDALE asked the Chancellor to consider the advisability of granting superannuation allowances to dispensary doctors who had reached the age of 65, but the Chairman ruled that that question did not arise under the amendment. After some further discussion the Chancellor's amendment was agreed to, and the clause as amended was passed.

The Rag Flock Bill.

The Rag Flock Bill has been read a second time in the Commons and committed to a committee of the whole House.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 8TH.

Colonial Chemists and British Registration.

Mr. KELLAWAY asked the Secretary to the Treasury whether he was aware that the negotiations between the council of the Pharmaceutical Society of Great Britain and the colonial representatives with a view to formulating a by-law providing for the admission to the Register of Chemists of persons holding colonial certificates of qualification equivalent to the British qualification had now been in progress for about three years; whether he had any reason to suppose that these negotiations would be completed by the time the National Insurance Bill became operative; and, if not, how he proposed to prevent chemists holding colonial certificates, and who were now in business in this country, being excluded from the lists of chemists qualified to dispense medicines under the Bill.—Mr. MCKINNON WOOD replied: I am aware of the fact stated in the first part of the question. I am unable at present to say when the negotiations will be completed or what alternative plan may be adopted in the event of their proving abortive, but the honourable Member may rest assured that the matter will not be lost sight of.

Mr. GLYN-JONES: Is the right honourable gentleman aware that such a by-law has been passed at three meetings of the Council of the Pharmaceutical Society, and that at the last meeting, held a week ago, a by-law providing for the recognition of colonial certificates was passed for the first time?—Mr. MCKINNON WOOD: I have been informed on good authority that that is the case.

Chinese Pork.

Mr. FELL asked the President of the Local Government Board when the report of the inspector employed to inquire into the conditions of the production of pork in China would be published.—Mr. BURNS answered: The report has been published and I am sending the honourable Member a copy of it.

Industrial Fatal Accidents.

Mr. ARTHUR HENDERSON asked the Secretary of State for the Home Department whether he could give the number of fatal accidents in places under the Factory Acts during the first nine months of 1911 and the corresponding period of 1910; also the number of cases of lead poisoning and other industrial diseases reported to the Home Office inspectors during the same periods.—Mr. MCKENNA said in reply: The figures asked for are as follows:—Fatal accidents in the first nine months of 1910, 780; in the first nine months of 1911, 819; cases of industrial poisoning in the same periods—in 1910, 412; in 1911, 560.

THURSDAY, NOV. 9TH.

Parliamentary Inquiry into Patent Medicines.

Mr. C. BATHURST asked the Secretary of State for the Home Department whether he was aware that the yield of stamp duty in respect of patent medicines during the year ended March 31st last was £325,646, which was an increase of £12,532 on the receipts from this source for the previous year; and whether, in view of the present consumption by poor persons of worthless concoctions of this description possessing no curative properties, he would, without further delay, introduce legislation dealing with the matter.—Mr. MCKENNA replied: I agree with the view of my predecessor that the subject of the conditions of the sale of patent medicines might usefully be considered by a Select Committee next session. I do not understand the honourable Member to suggest that all patent medicines are worthless concoctions.

The Teeth of School Children.

Baron DE FOREST asked the President of the Board of Education whether, in view of the condition of affairs set forth in the report of the chief medical officer of the Board, he would require every local education committee to provide for the regular inspection, by a properly qualified dental surgeon, of the teeth of the children under its care.—Mr. PEASE said in reply: I do not think that there is any necessity at present to place dental inspection on a different basis from other parts of the medical and physical examination of the child. Examination of the mouth, including the teeth, is made in all cases by the school medical officer and his medical assistants. In a number of areas dentists have also been appointed to aid the school medical officer in this part of the work, which the Board is carefully watching. The Board does not think it advisable at the present moment to place the additional burden suggested by the honourable Member upon local authorities.

Health at Osborne College.

Lord CHARLES BERESFORD asked the Civil Lord of the Admiralty whether there had been many cases of blood poisoning at Osborne College; and, if so, whether these cases had occurred through the foulness of the river Medina owing to the sewers running into it near the Kingston workshops.—Mr. LAMBERT answered: There have been only two cases among cadets at Osborne College which could be described as "blood poisoning" since the College was opened in 1903. There is no evidence to connect either with the condition of the river Medina.

Hospital Surgeons and National Insurance.

Sir PHILIP MAGNUS asked the Chancellor of the Exchequer whether a physician or surgeon in receipt of a salary, on account of his services to a hospital, of £50 a year, but whose professional income exceeded £1000 a year, came under the compulsory insurance clauses of the National Insurance Bill.—Mr. LLOYD GEORGE replied: The answer is in the negative.

Vaccination of Children.

Mr. LANSBURY asked the President of the Local Government Board whether his attention had been called to the fact that at an inquest held at Leigh on two children who died about 13 days after vaccination with Government lymph, it was stated that the recommendations of the Local Government Board were that Poor-law children should be vaccinated within seven days from birth; whether these recommendations were made by the Local Government Board; and, if not, whether he would consider the desirability of informing all Poor-law medical officers of the present views of the Board in the matter of vaccinating workhouse children at such an early age.—Mr. BURNS wrote in reply: The Local Government Board has made no recommendation to the effect suggested. It has always held the view expressed by the Royal Commission on Vaccination that, although under favourable conditions vaccination may be carried out within a few days of birth, the practice is to be deprecated unless there is at the time obvious danger of small-pox contagion, or unless the parent specially requests that the operation may be performed. My medical inspectors have been instructed to communicate this view to boards of guardians and their officers when needful, and I do not think it necessary to make any general communication to Poor-law medical officers on this subject.

The Advisory Committee to the Insurance Commissioners.

Dr. ADDISON asked the Chancellor of the Exchequer whether it was his intention that at least one of the women members of the Advisory Committee to the Insurance Commissioners should be a registered midwife. Mr. LLOYD GEORGE furnished the following reply: The answer is in the affirmative.

MONDAY, NOV. 13TH.

The Teeth of School Children.

Baron DE FOREST asked the President of the Board of Education whether he was aware that, at the centres in London where dental treatment had been provided for children attending council schools, it

had been found at an early stage to be necessary to supplement the work of the school doctors by special dental inspections; whether he had any information showing that the incidental examination of the teeth in the course of the ordinary medical inspection was any more adequate in other areas; and whether, in view of the experience of these London centres and of the condition of affairs revealed by the report of the chief medical officer of the Board, he would reconsider his decision that there was no necessity to insist upon a special dental inspection.—Mr. PEASE said in reply: The answer to the first part of the question is in the affirmative. With regard to the second part, the examination of teeth varies in degree and character in different areas. With regard to the last part, I am fully alive to the importance of this matter, but I am unable to add anything at present to my answer to the honourable Member's question on the subject on Nov. 9th.

Proposed Sanatorium at Abergele.

Sir HERBERT ROBERTS asked the President of the Local Government Board whether he had considered the practically unanimous representations made by the ratepayers of Abergele and by the Abergele urban district council and other local bodies, supported by the medical officer of health of the county of Denbigh, against the acquisition by the South Manchester board of guardians of Plas Ucha, Abergele, for the purpose of a sanatorium; and whether, in view of the evidence as to the injury which the establishment of a sanatorium would inflict upon Abergele as a residental neighbourhood and summer resort, he could postpone his decision as to the Order until consideration had been given to the proposals under the Insurance Bill for conferring upon local authorities special powers of joint action in respect of the erection of sanatoriums and the distribution of sanatorium benefits.—Mr. BURNS answered: I have given very careful consideration to this matter from every point of view, and I have come to the conclusion that, subject to the observance of certain conditions, assent should be given to the proposal of the guardians. I have sent to my honourable friend a copy of the letter I have addressed to the guardians on the subject.

Royal Army Medical Corps.

Mr. BENNETT-GOLDNEY asked the Financial Secretary to the War Office what was the present shortage of the Royal Army Medical Corps, of all ranks, in the Regular Army, in the Reserve, and in the Territorial Force; at the last three examinations of candidates for commissions in the Royal Army Medical Corps had the numbers of those who had duly qualified exceeded the number of vacancies; and how many candidates were there at present for existing vacancies in the commissioned ranks of the Royal Army Medical Corps.—Mr. TENNANT replied: The present shortage is as follows:—

	Officers.	Other ranks.
Regulars	22	208
Reserves	—	3174
Territorial Force	283	1759

There is no definite establishment of officers of the Special Reserve, but the present strength amounts to 114. At the last three examinations for commissions the numbers of candidates qualified exceeded the number of vacancies. For the examination to be held next January for not less than 20 vacancies, three candidates have already entered, but the list will not be closed until Jan. 15th.

Royal Naval Medical Service.

Mr. BENNETT-GOLDNEY asked the Secretary to the Admiralty whether he would state if the shortage of medical officers in the Royal Naval Medical Service at the present time was less than it was 12 months ago, and what was the shortage according to the last available figures in all grades, from inspector-general down to the junior surgeons.—Mr. MACNAMARA said in reply: The shortage is practically the same as it was 12 months ago—20 have entered and 22 have gone, owing to retirements or deaths. The shortage is 60 of all ranks.

Mr. BENNETT-GOLDNEY asked the honourable gentleman what were the names of the service and other members of the Consultative Board of the Royal Naval Medical Service; whether this committee had hitherto been habitually called together to carry out the work entrusted to it during the customary working hours of the Admiralty staff, or had it been called together on an officially appointed early closing day and after normal closing hours; and at what hour did this committee meet now and on what day.—Mr. MACNAMARA answered: The names of the members of the Medical Consultative Board are as follows: President: the Medical Director-General of the Navy. Civilian members: Sir W. Watson Cheyne, Sir Dyce Duckworth, and Professor W. J. R. Simpson; naval member, Surgeon-General Howard Todd; and secretary, Fleet-Surgeon James L. Smith. The Admiralty has no officially appointed early closing day. The Medical Consultative Board is called together when occasion arises, and usually meets about 5 P.M., as that hour has been ascertained to be most convenient for the civilian members irrespective of Admiralty working hours. There are no routine meetings. Meetings take place as and when found necessary.

TUESDAY, NOV. 14TH.

Conscientious Objections in Scotland.

Mr. WILKIE asked the Lord Advocate whether he could state the total number of declarations of conscientious objection to vaccination made in Scotland in the years 1907, 1908, 1909, and 1910; and whether he could also give the percentages of these declarations to births.—Mr. URE replied: The information desired by my honourable friend for the years 1907, 1908, and 1909 is as follows:—

Year.	No. of births registered.	Declarations of conscientious objections to vaccination.	
		No.	Percentage.
1907	128,891	7,258	5·631
1908	131,406	15,846	12·059
1909	128,720	22,746	17·671
Total	389,017	45,850	11·786

The corresponding information for 1910 is not yet available.

Plague in India.

Mr. KEIR HARDIE asked the Under Secretary of State for India what special measures, if any, were adopted for dealing with the plague in and around Delhi; or whether he could say to what he attributed the practical disappearance of the plague from that district.—Mr. MONTAGU replied: In the Delhi district the ordinary measures for dealing with plague have been applied. The freedom of the district from plague during the third quarter of the year is not unusual. In 1910 no case was reported from July 1st up to the third week of September. This year the whole of the Punjab from July up to date has been exceptionally free from plague.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOAL, J. G., M.B., Ch.B. Edin., has been appointed House Surgeon at the West Kent General Hospital, Maidstone.

BUSHNELL, F. G., M.D., B.S. Lond., D.P.H., has been appointed Deputy School Medical Officer to the West Sussex Education Committee.

EVANS, DOUGLAS GORDON, M.B., B.S. Lond., has been appointed Medical Superintendent of the Children's Memorial Hospital, Cedar Avenue, Montreal, Canada.

HAMER, W. H., M.D. Cantab., F.R.C.P. Lond., M.R.C.S. Eng., D.P.H., has been appointed Medical Officer of Health and School Medical Officer for the County of London.

HILEY, R. MELVILLE, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Royal Hospital for Diseases of the Chest.

JONES, EDITH A., M.B., B.S. Lond., has been appointed Assistant School Medical Officer to the Swansea Education Committee.

MACARTNEY, DUNCAN, M.B., M.Ch. Glasg., has been appointed Full Visiting Surgeon of the Western Infirmary, Glasgow.

MCEWEN, J. D., M.B., B.Ch. Edin., has been appointed House Physician and Casualty Officer at the Walsall and District Hospital.

O'NEILL, JAMES J., M.B., B.Ch., B.A.O. R.U.I., has been appointed House Surgeon at the Carnarvonshire and Anglesey Infirmary.

PINTO-LEITE, HUBERT, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Anæsthetist to the London Throat Hospital.

TODD, F. R., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon at the West Kent General Hospital, Maidstone.

WALLACE, JOHN, M.B., C.M. Edin., has been appointed Medical Officer of Health and Medical Superintendent of the Isolation Hospital by the Weston-super-Mare (Somerset) Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum, all found.

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Second Anæsthetist.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM CITY ASYLUM, Winson Green.—Junior Assistant Medical Officer. Salary £150 per annum, with board, laundry, &c.

BRENTFORD UNION INFIRMARY.—Second Assistant to the Medical Superintendent, unmarried. Salary £125 per annum, with apartments, rations, washing, &c.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £50 per annum, with board, lodging, and washing.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary £100 per annum, with board, apartments, and laundry.

BURY INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CARDIFF, KING EDWARD VII.'S HOSPITAL.—Three Honorary Assistant Anæsthetists.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence. Also Registrars and Clinical Assistants.

COLCHESTER EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

DERBY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £140 per annum, with board and residence.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Physician.

FLEETWOOD, ROSSALL SCHOOL.—Resident Medical Officer, unmarried. Salary £250 per annum, with board and residence.

HASTINGS, EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary at rate of £70 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Physician to Out-patients. Also Surgeon to Out-patients. Also Medical Registrar. Salary £127 10s. per annum. Also House Surgeon for six months. Salary £30, with board, residence, and washing.

HULL ROYAL INFIRMARY.—Assistant House Surgeon. Salary at rate of £60 per annum, with board and lodging.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

KENSINGTON DISPENSARY AND CHILDREN'S HOSPITAL.—Vacancy on the Honorary Medical Staff.

LICHFIELD, BURNTWOOD COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £75 per annum, with board, residence, and washing.

LONDON FEVER HOSPITAL, Liverpool-road, Islington, N.—Resident Medical Officer. Salary £250 per annum, with board and residence.

LONDON HOSPITAL DENTAL SCHOOL.—Two House Anæsthetists. Salary £40.

LONDON LOCK HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

LONDON TEMPERANCE HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with board, lodging, and washing.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—House Surgeon and Assistant House Surgeon, both unmarried. Salary £100 and £80 per annum respectively, with board, lodging, and laundry.

MANCHESTER CHILDREN'S HOSPITAL (OUT-PATIENTS' DEPARTMENT), Gartside-street, Manchester.—Medical Officer. Salary £180 per annum.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer. Salary £100 per annum, with board, apartments, and washing.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board and washing.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Two House Surgeons. Salary at rate of £50 per annum, with board and residence.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, lodging, and washing.

OXFORD UNIVERSITY.—Readership in Pharmacology.

PORTSMOUTH, MUNICIPAL TUBERCULIN DISPENSARY.—Assistant Medical Officer. Salary at rate of £250 per annum.

POWICK, WORCESTER COUNTY AND CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £180 per annum and all found.

PRESTON, COUNTY ASYLUM, Whittingham.—Pathologist and Assistant Medical Officer. Salary £200 per annum, with board, apartments, and washing.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Surgeon-in-Charge of Out-patient Department for Ear, Nose, and Throat.

RICHMOND, SURREY, ROYAL HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board and apartments.

ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon. Salary £60 per annum, with board, lodging, and washing.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1913.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Morning House Anæsthetist. Salary £25 per annum.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN.—Honorary Ophthalmic Surgeon. Also Honorary Dental Surgeon.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician. Also Surgical Registrar.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £60 per annum, with board, lodging, and washing.

SUNDERLAND CHILDREN'S HOSPITAL.—Resident Medical Officer. Salary £80 per annum, with board, residence, and laundry.

THROAT HOSPITAL, Golden-square, W.—Honorary Assistant Surgeon.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, and washing.

UNIVERSITY OF LONDON.—Examiners.

WEST LONDON HOSPITAL, Hammersmith, W.—House Physician for six months. Board, lodging, and laundry allowance.

WIGTON, COUNTY OF.—Medical Officer for the Medical Inspection and Supervision of School Children. Salary £250 per annum, with travelling expenses.

Births, Marriages, and Deaths.

BIRTHS.

BALLANCE.—On Nov. 12th, at All Saints Green, Norwich, the wife of Hamilton A. Ballance M.S. Lond., F.R.C.S. Eng., of a son.

CLARKE.—On Nov. 5th, at Amphill, Reading, the wife of Fielding Clarke, M.R.C.S. Eng., L.R.C.P. Lond., &c., of a daughter.

GABB.—On Nov. 7th, at Cornwallis-gardens, Hastings, the wife of Harry Gabb, B.A., M.B., B.C., of a son.

LAING.—On Nov. 13th, at Husbands Bosworth, Rugby, the wife of G. D. Laing, M.D., of a son.

O'FLAHERTY.—On Nov. 9th, at Mount Edgcumbe-terrace, Stoke, Devonport, the wife of A. R. O'Flaherty, Major, R.A.M.C., of a son.

WORTHINGTON.—On Nov. 7th, at Nuwara Eiliya, Ceylon, the wife of Captain Frank Worthington, R.A.M.C., of a daughter.

MARRIAGES.

MACKINNON—ROWELL.—On Nov. 11th, at St. Paul's Church, Upper Norwood, Murdoch Mackinnon, M.D., D.P.H., Medical Registrar of Seamen's Hospital, Greenwich, to Isabella Irvine (Lily), third daughter of the late David Rowell and Mrs. Rowell, of Wallington Lodge, Upper Norwood.

DEATHS.

BUCKELL.—On Nov. 11th, Francis John Buckell, M.B., B.S., aged 67 years.

NEATBY.—On Nov. 12th, at Brookfield, Highgate, Thomas Neatby, M.D., aged 76 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

HEALTH AND CRIME OF CYPRUS.

ACCORDING to the Cyprus Blue Book for the year ending March 31st, 1911, the general health and sanitary condition of the island have been most satisfactory. There was no serious outbreak of infectious or contagious disease until the conclusion of the year, when an outbreak of small-pox occurred, which was kept in check by vigorous measures of isolation and energetic vaccination. Plague still menaced the island as in previous years, and the outbreak of cholera in neighbouring countries caused anxiety, but fortunately the island escaped both these serious dangers. A marked reduction took place in the number of cases of cerebro-spinal meningitis, only 84 patients, as against 1000 in the previous year, being mentioned in the returns. The cases showed a milder form of infection, and there is every indication that the disease has assumed a sporadic form. Malarial fever was less prevalent than in former years, 6074 cases being returned, against 7450 in 1909 and 10,476 in 1908. The people are beginning to recognise the value of the various prophylactic measures recommended; the use of mosquito nets, improved sanitation, and quinine is becoming more general. The hospitals of the island show an all-round increase in attendance and admissions. The total number of in-patients treated at the Government Central Hospital at Nicosia and the five district-aided hospitals was 2201, with 125 deaths (5·67 per cent.). The out-patient departments were also well attended; the patients numbering 23,859. 298 surgical operations were performed, to which must be added 316 minor operations among out-patients. The Central Hospital, the only purely Government hospital in the island, had a most successful year. The beds now number 53 and provide accommodation for men, women, and children. There are wards for the treatment of poor and paying patients. Medical, surgical, eye, and isolation beds now exist, and the general utility of the hospital is improving year by year. Nearly 200 surgical operations were performed at this hospital alone, and patients from all parts of the island received the skilful and careful attention of an efficient and well-trained medical and nursing staff. In all the other district hospitals also advancements and important improvements have been made; among these the Larnaca Hospital, built from funds raised by private effort and in great measure supported in the same manner, is noteworthy. The number of in-patients treated during the year was 232 and of out-patients 3603. Useful structural additions have been made and an English nurse's services have been secured in place of those of a native. The hospital is well equipped as regards beds, bedding, instruments, and other arrangements for the comfort of patients. The returns of the 12 rural medical officers show that 10,461 patients were treated by them. The services of these officers are much appreciated by the inhabitants of the more remote towns and villages of the island.

At the close of the year the inmates of the leper farm numbered 99. Their lot has been considerably relieved by a substantial increase in the grant allowed them by Government. Each year, on account of the extension of the Government Medical Service and the increasing number of medical practitioners, fewer cases of the disease escape notice and segregation. One child was admitted to the home, there being now 11 of both sexes thus removed from the farm, and it is interesting to report that in no case so far has any sign of the disease appeared. The education of these children is receiving attention, and they are being taught trades. A lunatic asylum is being built outside Nicosia, and it is hoped that it will be completed next year. Twenty cases of insanity were admitted to the lunatic wards of the hospitals during the past year; six inmates died, 20 were sufficiently recovered to be released to the care of relatives or friends, and at the end of the year 56 patients remained under treatment. Vaccination, although not compulsory, was extensively carried out. Fresh imported glycerinated vaccine was the medium used. 6332 of these operations were carried out; 6197 were primary vaccinations. It is difficult to over estimate the value to the island of the work carried out by the analyst at the Government laboratory. Under the head of criminal investigation 240 samples were examined, chiefly relating to murder and poison cases, and expert evidence was given by the Government analyst in many criminal trials.

In the section of the report devoted to "Crime and Criminal Statistics" the following passage occurs: "The most disquieting feature is the increase in the number of cases of murder and manslaughter." In commenting upon this unsatisfactory feature the Chief Justice brings to notice some interesting traits in the character of the villager which tend to account to some extent for the prevalence of this class of crime. The majority of the inhabitants of Cyprus live in villages and are as a rule poor, while their habitations are for the most part comfortless and insanitary. Their pursuits are almost entirely pastoral or agricultural. These people are very sensitive and ready to take offence. Any insult

rankles, and their minds seem to brood over any slight, real or imaginary, however small, until it has assumed proportions which, for their self-esteem, they consider they must revenge by murder. Conversely there are men in some of these villages who for no personal reason whatever, but solely in response to a small reward, say £10, will murder a man against whom they have no grievance or whom they have never seen before. In many cases if an inhabitant is obnoxious to the community they will have him killed by common agreement. They are very quick-tempered and many homicides occur in brawls in cafés and at weddings where men are under the influence of drink. Without reflection a knife is drawn and their natural impulse is to kill. "I have tried many murderers in this island," writes the Chief Justice, "and I cannot recall one who was sorry for his victim or showed remorse for his crime. As a rule, a murderer boasts of his crime. It is a source of pride to himself and gives him power over his neighbours." There are many ways, both direct and indirect, of dealing with such a state of affairs in a community where life appears to be held so lightly. Religion and education both have their part to play and are complementary rather than antagonistic to repressive measures. The legislature declines to pass any law effectually enabling the carrying of dagger-knives to be suppressed and strongly opposes any prohibition of carrying firearms. Small punishments are not likely to stop the practice. It is a question how far heavy penalties are desirable. In the case of intentional killing without premeditation the only punishment is 15 years under the Ottoman Penal Code, and the term has been practically cut down to 11 years and 3 months by the rules made for the remission of sentences. There is a large volume of evidence to show that the passions and jealousies raised at elections are the direct or indirect cause of many of the crimes of violence.

THE DANGER OF USING ELECTRICAL BED-WARMERS.

To the Editor of THE LANCET.

SIR,—Whilst in no way being desirous of exaggerating the danger of fire from electrical contrivances intended to minister to the comfort of modern man, I think that at this season a word of warning should be addressed to the many elderly people and invalids who are being fascinated by the handy and practical advantages of electrical bed-warmers—i.e., the substitute for the hot-water bottle, and which are intended to retain heat as long as they are attached to the local electrical supply service. These electrical bed-warmers are extremely dangerous, as they easily ignite when kept under cover in such a manner as not to freely radiate heat—i.e., if kept tightly covered under bedclothes or the like. I have before me the remains of one of these appliances, well devised and attractively made, recently purchased by a medical man for the use of a lady. After use of about three hours on the 240 volt circuit of one of our London electrical supply companies the bed-warmer ignited the bedclothes, and it was entirely a matter of chance that the user escaped with her life owing to the heat created by the smouldering bedclothes waking her before asphyxiation. I have since tried several similar appliances purchased in the open market on a 110 volt current, and I have not so far found one that can be described as free from danger. I trust this timely word of warning at this season may be the prevention of unnecessary deaths from fire.

I am, Sir, yours faithfully,

Nov. 10th, 1911. CAVE.

POOR CHILDREN'S YULE TIDE ASSOCIATION.

To the Editor of THE LANCET.

SIR,—The work of the Poor Children's Yule Tide Association has my very heartiest sympathy, and I desire to commend it to all readers of your columns as deserving of support. By means of this association the poor little slum lasses and lads of our city have each the certainty of a real Christmas gift, and those to whom this season annually brings numerous presents can hardly understand the joy of these unfortunate little ones at being remembered by Santa Claus in this kindly way. Last year there were 103 Christmas-trees and 30,000 toys distributed by the association in 321 of the poorest districts of London. This year we not only wish to do as well, but to reach even a larger number than before, in order that not one little child shall be left out of the distribution.

Christmas comes but once a year, and only once a year is this appeal made. While busy with one's own plans for the festive season, it is but fitting that a thought hould be spared for the many toyless and joyless little bairns of our streets. Subscriptions should be sent to the Hon. Sec., Poor Children's Yule Tide Association, 32, John-street, Theobalds-road, W.C.

I am, Sir, yours faithfully,

Hyde Park Barracks, S.W., Nov. 10th, 1911. COMPTON.

A NEW ORDNANCE MAP.

Mr. Edward Stanford, official agent for the large-scale ordnance maps, announces the publication of the first 165 sheets of a new issue on the scale of 50 inches to a mile (1:1250). Hitherto, apart from the town plans, the largest scale on which urban districts have been obtainable has been the well-known 25 inches to a mile, and the new issue is based on an enlargement of that map. The larger scale map has been specially prepared for use primarily in connexion with land valuation, and the area covered by each sheet is one quarter of that of a 25-inch sheet. The size of the sheets is 40 × 27 inches, and the price 2*s.* 6*d.* each. The sheets already issued deal with various districts in Cheshire, Durham, Hampshire, Lancashire, Leicestershire, Northumberland, Sussex, and Yorkshire. They may be inspected at Mr. Stanford's Geographical Establishment, 12, 13, & 14, Long-acre, W.C.

THE BRITISH MEDICAL MAN ABROAD: TURKEY.

To the Editor of THE LANCET.

SIR,—When recently turning over your last Students' Number I observed the statement on p. 656 under this title: "It has not yet happened that a European physician failed to pass the colloquium." This, I fear, is not correct. Unfortunately a medical missionary of this society—M.D., Ch.B. Dub.—failed to pass in December, 1909. The actual examination was really nothing, the gentleman being asked to enumerate the varieties of abscesses found in the liver, their treatment, diagnosis, symptoms, &c., and the symptoms, diagnosis, and treatment of dysentery. Various conjectures were made by Constantinople friends as to the reason, and whether it was due (1) to the fact that his name had a termination which in the Turkish mind suggested the possibility of his being an Armenian; (2) in order to show the authority of the examiners that they were not bound to pass all applicants; (3) or whether "nerves" and "French" were in any way responsible (the doctor admitted being very nervous), the fact remains that he was "ploughed." I thought you would probably be glad to be corrected on this point. I might perhaps add that he was not permitted to sit a second time for the colloquium.

I am, Sir, yours faithfully,

SAML. W. W. WITTY.

Church Missionary Society, Salisbury-square, E.C., Nov. 8th, 1911.

J. C. H. L.—The "wonderful specific," according to our analysis, contains chalk, menthol, and sugar, but no alkaloid.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

September–November (Antwerp).—International Exhibition of Alimentation, Brewing, Wines, and Liqueurs.
Nov. 10th–25th (Manchester).—Smoke Abatement Exhibition.
,, 21st–23rd (Montreal).—Canadian Public Health Association (First Annual Meeting).
November (Rome).—Fourth International Congress of Physical Education.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
,, 19th–23rd (Moscow).—Third Pan-Russian Therapeutical Congress.

In 1912:—

Jan. 20th–27th (Hong-Kong).—Second Biennial Congress of the Far Eastern Association of Tropical Medicine.
March 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
,, (London).—First Congress of Pure Food and Health Society of Great Britain.
,, (Berlin).—Thirty-third Balneological Congress.
April 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
,, 14th–20th (Rome).—Seventh International Congress on Tuberculosis.
,, (Rome).—Seventh International Congress of Dermatology and Syphilology.
,, (Giessen).—Congress on Study of Families, Inheritance, and Race Hygiene.
Spring (London).—Second Optical Convention.

The following journals, magazines, &c., have been received:—

Archives Générales de Médecine, Dublin Journal of Medical Science, Archives Internationales de Neurologie, Archives de Médecine et de Pharmacie Militaires, Magazine of the London (Royal Free Hospital) School of Medicine for Women, Bulletins et Mémoires de la Société de Radiologie Médicale de Paris, Revue de Gynécologie, Folia Therapeutica, Quarterly Journal of Experimental Physiology, Jahrbuch für Kinderheilkunde und Physische Erziehung, St. Paul Medical Journal, International Journal of Surgery, Journal of the Royal Institute of Public Health, Aesculapae, Archivos Españoles de Neurologia, Psiquiatria y Fisioterapia, Indian Medical Record, Indian Medical Journal, Local Government Chronicle, Ash's Monthly, Military Surgeon.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—J. H. Targett, W. W. H. Tate), at 4 P.M.

JOINT MEETING with the MEDICO-PSYCHOLOGICAL ASSOCIATION, at 11, Chandos-street, W.

Discussion:
Amenorrhœal Insanity (opened by Dr. C. T. Ewart).

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

Papers:
Dr. F. Ransom: The Effects of Adrenalin.
Dr. A. R. Jordan: Urinary Antiseptics

PATHOLOGICAL SECTION (Hon. Secretaries—J. C. G. Ledingham, A. E. Boycott): at 8.30 P.M.

Dr. W. Langdon Brown: The Bundle of His from a Case of Heart-Block (with specimens and lantern slides).
Dr. A. E. Boycott: Sahli's Hæmoglobinometer.
Dr. H. Priestley: The Differentiation of the Diphtheroid Group of Organisms.
Dr. H. R. Dean: Further Experiments on Complement-fixation and Precipitation.
Dr. J. Henderson-Smith: Some Experiments on Lysis.
Dr. J. C. G. Ledingham: Some Experiments on Phagocytosis regarded as an Adsorption Phenomenon.

THURSDAY.

NEUROLOGICAL SECTION (Hon. Secretaries—Wilfred Harris, T. Grainger Stewart): at 8.30 P.M.

Dr. Boyer: Systematic Examination of the Central Nervous System in a Case of Obstetrical Paralysis.
Mr. Sydney Mann: Method of Colouring Brains to Demonstrate Cortical Localisation and Arterial Supply, for Teaching Purposes.
Dr. F. W. Mott, F.R.S.: Colour Photographs of Microscopic Specimens of the Nervous System.
Dr. Lind: Experimental Lead Poisoning (Sir Thomas Oliver). Examination of the Brains of Two Animals.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—T. R. Whipham, H. S. Clogg, Percy G. Lewis), at 11, Chandos-street, W.: at 4.30 P.M.

Cases:
Dr. Vincent Dickinson: Infantilism.
Dr. R. H. Miller: (1) Chronic Interstitial Nephritis with Infantilism; (2) Intracranial Tumour.
Mr. D. C. L. Fitzwilliams: Cases to Illustrate his Paper.
Dr. F. J. Poynton: Psoriasis and Flexion of the Terminal Phalanx of the Thumb.
Dr. A. C. D. Firth: A Family (Mother and Three Children) showing Congenital Absence of the Patella and Deformities of the Nails.
Dr. R. S. Trevor and Dr. H. D. Rolleston: Pathological Specimen—Cerebral Aplasia and Hydrocephalus.

Papers:
Dr. H. D. Rolleston and Dr. J. B. Molony: Purpura in Acute Infective Diarrhœa of Infants.
Mr. D. C. L. Fitzwilliams: Congenital Flexion of the First Interphalangeal Joints of the Fingers.

EPIDEMIOLOGICAL SECTION (Hon. Secretaries—W. H. Hamer, G. S. Buchanan): at 8.30 P.M.

Paper:
Dr. Sandilands: Small-pox in London, 1885 to 1935.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Adjourned Discussion on the Differential Diagnosis of Syphilis and Parasyphilis of the Nervous System. Speakers:—Sir Victor Horsley, Dr. R. Russell, Dr. T. B. Hyslop, Major French, R.A.M.C., Dr. W. Harris, Dr. F. Buzzard, and Mr. A. Fleming.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

TUESDAY.—3 P.M., Dr. G. Clarke: Sterilisation from the Eugenic Standpoint.—Dr. C. T. Ewart: Amenorrhœal Insanity.

MEDICO-LEGAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—8.30 P.M., Dr. C. G. Grant: The Sydney Street Affair from its Medico-Legal Aspect.

CHELSEA CLINICAL SOCIETY, St. George's Hospital Medical School, S.W.

TUESDAY.—8.30 P.M., Dr. A. G. Buchanan: Psycho-therapy. A Discussion will follow.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Dr. W. M. Ettles: Some Recent Developments in Ophthalmic Therapeutics.—Dr. H. R. Andrews: Pyelo-nephritis in Pregnancy.—Dr. Langdon Brown: A Brief Appreciation of Hughlings Jackson's Work.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Titchborne-street, Edgware-road, W.

THURSDAY.—Dr. J. Taylor: Early Signs and Symptoms of Nervous Disease.—Mr. D. C. L. Fitzwilliams: Syphilitic Affections of Bones met with in Childhood.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Mr. J. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. H. French: Hypothyroidism.
TUESDAY.—4 P.M., Dr. E. Winter: Clinique (Medical). 5.15 P.M., Lecture:—Dr. W. C. Brown: Protozoon Dysentery at Home and Abroad.
WEDNESDAY.—4 P.M., Mr. C. Ryall: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. O. Grünbaum: Methods of Making an Accurate Prognosis in Renal Disease.
THURSDAY.—4 P.M., Dr. E. Cautley: Clinique (Medical). 5.15 P.M., Lecture:—Dr. F. Taylor: Pleuritic Effusion, its Diagnosis and Treatment.
FRIDAY.—4 P.M., Dr. StClair Thomson: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Urinary Surgery.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Low: Yellow Fever.
WEDNESDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Ll. Williams: Oral Conditions in their Relations to General Conditions of Health or Disease.
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture IV.)
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. S. Taylor: The More Serious Forms of Valvular Disease of the Heart.
SATURDAY.—10 A.M., Medical Registrar: Demonstration of Cases in Wards. Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. H. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. C. O. Hawthorne: The Meaning of Sphygmomanometric and Sphygmographic Records.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Dr. Rankin: Neurotic Dyspepsia.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies).
TUESDAY.—2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. H. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. G. F. Hadfield: Post-anæsthetic Vomiting.
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. Stewart); 5.30 P.M., Eye Operations (Mr. Brooks).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. H. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappell). 4.30 P.M., Demonstration:—Selected Medical Cases (Dr. G. P. Chappel).
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Bosanquet: Tuberculosis in its Relation to Injuries and Accidents.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Encephalitis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Epilepsy.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3.45 P.M., Lectures:—Mr. W. Stuart-Low: Methods of Examination.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. Griffith: Pathology of the Epidermis.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell; Tuberculosis of the Skin—I., Lupus Vulgaris; II., Tuberculosis Verrucosa Cutis; III., Scrofuloderma.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., A Demonstration of Clinical Cases will be given by Members of the Honorary Staff. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.,, Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (25th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 15th, 1911.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Nov. 9	29·51	S.	0·25	71	50	39	41	41	Overcast
,, 10	29 55	S.	...	48	45	41	42	43	Cloudy
,, 11	29·81	S.W.	0·11	55	47	38	38	38	Overcast
,, 12	29·30	W.	0·43	77	57	38	42	46	Cloudy
,, 13	29 79	S.W.	0·34	65	52	42	44	46	Raining
,, 14	30 31	S.W.	0·06	79	56	44	46	48	Fine
,, 15	29 89	S.W.	...	59	53	48	47	49	Overcast

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